ORDER NO.CHM0702001CE
B24

Service Manual

DVD Recorder

Notes: This model's DVD Drive is VXY1961.

DMR-EZ17P

Vol. 1

Colour

(S).....Silver Type
(K).....Black Type

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety Precaution

1.1. General guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage current cold check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.

   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

1.1.2. Leakage current hot check (See Figure 1 .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15µF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliampere. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

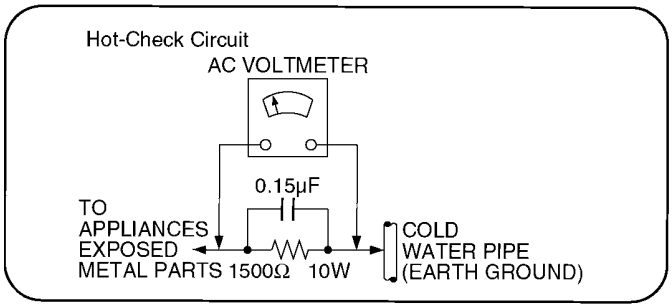


Figure 1

1.2. Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: Hollyland, Type:50T, 2.0A, 250V)

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatic Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatic Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistor-sand semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2.2. Precaution of Laser Diode

CAUTION:

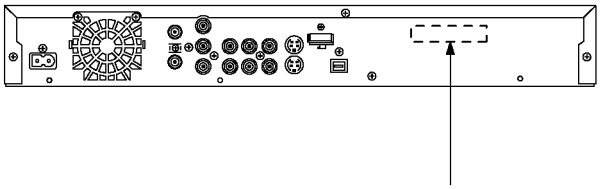
This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.
Wave length: 662 nm (DVDs)/780 nm (CDs)
Maximum output radiation power from pickup: 100 µ W/VDE
Laser radiation from the pickup lens is safety level,but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

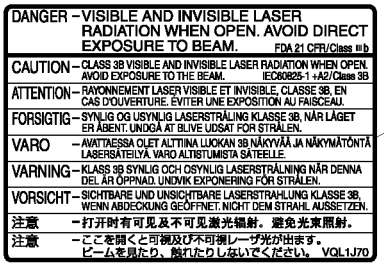
ACHTUNG:

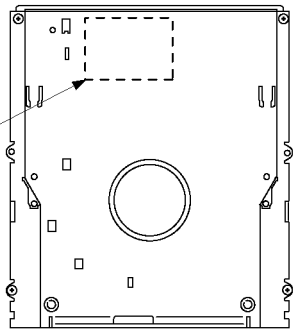
Dieses Produkt enthält eine Laserdiode.
Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Laserinheit abgestrahlt.
Wellenlänge: 662 nm (DVDs)/780 nm (CDs)
Maximale Strahlungsleistung der Lasereinheit: 100 µ W/VDE
Die Strahlung der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.



Product complies with DHHS Rules 21 CFR Subchapter J in effect at date of manufacture.
Matsushita Electric Industrial Co., Ltd.
Kadoma, Osaka, Japan


DANGER – VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. FDA 21 CFR/Class IIIb
CAUTION – CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM. IEC60825-1 +A2/Class 3B
ATTENTION – RAYONNEMENT LASER VISIBLE ET INVISIBLE. CLASSE 3B, EN CAS D'OUVERTURE. ÉVITER UNE EXPOSITION AU FAISCEAU.
FORSIGTIG – SYNLIG OG USYNLIG LASERSTRÅLING KLASSE 3B, NÅR LÅGET ER ÅBENT. UNDGÅ AT BLIVE UDSAT FOR STRÅLEN.
VARO – AVATTAESSA OLET ALTTIINA LUOKAN 3B NÄKYVÄÄ JA NÄKYMÄTÖNTÄ LASERSÄTEILYÄ. VARO ALTISTUMISTA SÄTEELLE.
VARNING – KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK EXPONERING FÖR STRÅLEN.
VORSICHT – SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注意 – 打开时有可见及不可见激光辐射。避免光束照射。
注意 – ここを開くと可視及び不可視レーザ光が出ます。ビームを見たり、触れたりしないでください。 VQL1J70



CAUTION!
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

2.3. Service caution based on legal restrictions

2.3.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.

  (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.

  RFKZ03D01K----------(0.3mm 100g Reel)

  RFKZ06D01K----------(0.6mm 100g Reel)

  RFKZ10D01K----------(1.0mm 100g Reel)

Note

* Ingredient: tin (Sn), 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

3 Service Navigation

3.1. Service Information

This service manual contains technical information which will allow service personnel's to understand and service this model.
Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

1) This service manual does not contain the following information, because of the impossibility of sevicing at component level.

   * Schematic Diagram, Block Diagram and P.C.B. layout of Digital P.C.B.
   * Parts List for individual parts of Digital P.C.B.
   * Exploded View and Parts List for individual parts of DVD Drive.

2) The following category are recycle module part. Please send them to Central Repair Center.

   * Digital P.C.B. (EZ17P:RFKB79142A)
   * DVD Drive (VXY1961)

4 Specifications

Power supply	AC120 V, 60 Hz
Power consumption	Approx. 24 W
Power consumption in standby mode	Approx. 2.4 W (Shipping condition) Approx. 14.1 W (User setting: Quick Start: On)
Recording system	DVD-RAM: DVD Video Recording format DVD-R: DVD-Video format DVD-R DL (Dual Layer): DVD-Video format DVD-RW: DVD-Video format +R +R DL (Double Layer) +RW
Optical pick-up	System with 1 lens, 2 integration units (662 nm wavelength for DVDs, 780 nm wavelength for CDs)
Recordable discs	DVD-RAM: 2x SPEED (Ver.2.0) 2-3x SPEED (Ver.2.1) 2-5x SPEED (Ver.2.2) DVD-R(SL): 1x SPEED (Ver.2.0) 1-4x SPEED (Ver.2.0) 1-8x SPEED (Ver.2.0) 1-16x SPEED (Ver.2.1) DVD-R(DL): 2-4x SPEED (Ver.3.0) 2-8x SPEED (Ver.3.0) DVD-RW: 1x SPEED (Ver.1.1) 1-2x SPEED (Ver.1.1) 2-4x SPEED (Ver.1.2) 2-6x SPEED (Ver.1.2) +R(SL): 2.4x SPEED (Ver.1.0) 2.4-4x SPEED (Ver.1.1) 2.4-8x SPEED (Ver.1.2) 2.4-16x SPEED (Ver.1.3) +R(DL): 2.4x SPEED (Ver.1.0) 2.4-8x SPEED (Ver.1.1) +RW: 2.4x SPEED (Ver.1.1) 2.4-4x SPEED (Ver.1.2)
Quick Start for Recording	1 Sec. Quick Start for Recording on DVD-RAM* *From the power off state, recording on DVD-RAM starts about 1 second after first pressing the power button and then sequentially pressing the REC button (Quick Start Mode).
Recording time	Max. 8 hours (using 4.7 GB disc) XP : Approx. 1 hour SP : Approx. 2 hours LP : Approx. 4 hours EP : Approx. 6 hours/8 hours

Approx.

Recording Mode	DVD-RAM		DVD-R/ DVD-RW/ +R/+RW 4.7GB	DVD-R DL/ +R DL 8.5GB
	4.7GB	9.4GB (Double Sided)		
XP High picture quality recording mode	1 hour	2 hours	1 hour	1 hour 45 minis
SP Standard recording mode	2 hours	4 hours	2 hours	3 hour 35 minis
LP Long recording mode	4 hours	8 hours	4 hours	7 hours 10 minis
EP Extra long recording mode(6hours)	6 hours	12 hours	6 hours	10 hours 45 minis
EP Extra long recording mode(8hours)	8 hours	16 hours	8 hours	14 hours 20 minis

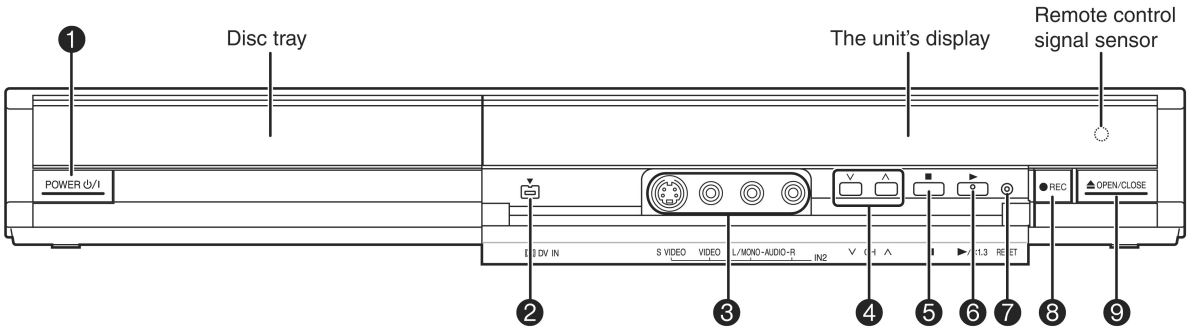
Region number	Region No.1
Playable discs	DVD-RAM: DVD Video Recording format DVD-R: DVD-Video format DVD-R DL (Dual Layer): DVD-Video format DVD-RW: DVD-Video format, DVD Video Recording format +R +R DL (Double Layer) +RW DVD-Video CD-Audio (CD-DA) CD-R/ CD-RW (CD-DA, MP3, JPEG)

Compression Method	MP3
	Format: ISO9660 level1 or 2 (except for extended formats), Joliet Compatible compression rate: 32kbps ~ 320kbps Compatible sampling rate: 16kHz, 22.05kHz, 24kHz, 32kHz, 44.1kHz, 48kHz This unit is not compatible with ID3 tags.
	CD (JPEG)
	Format: ISO9660 level1 or 2 (except for extended formats), Joliet Compatible pixels: between 34 × 34 and 6144 × 4096 pixels Sub sampling 4:2:2 or 4:2:0 This unit is not compatible with MOTION JPEG.
	MP3, CD (JPEG) Common Items
	Maximum number of folders :99 Recognizable folders per disc on this unit (including the root folder) Maximum number of files :999 Recognizable files per disc on this unit (total number for all the MP3, CD(JPEG) and other type of files.) This unit is compatible with multi-session This unit is not compatible with packet writing.
Television system	
TV system	NTSC system, 525 lines, 60 fields
Antenna reception input	Analog TV Channel: 2ch - 69ch Analog CATV Channel: 1ch - 135ch Digital TV Channel: 2ch - 69ch Digital CATV Channel: 1ch - 135ch
RF converter output	Not provided
Video system	
Recording system	MPEG2 (Hybrid VBR)
Input	LINE (pin jack) × 2, 1.0 Vp-p; 75 Ω S connector × 2 Y: 1.0 Vp-p; 75 Ω C: 0.286 Vp-p; 75 Ω
Output	LINE (pin jack) × 1, 1.0 Vp-p; 75 Ω S connector × 1 Y: 1.0 Vp-p; 75 Ω C: 0.286 Vp-p; 75 Ω
Component video output (480i/480P)	Y: 1.0 Vp-p; 75 Ω P_B: 0.7 Vp-p; 75 Ω P_R: 0.7 Vp-p; 75 Ω
Audio system	
Recording system	Dolby Digital (2ch)
Analog Input	LINE (pin jack) × 2 Reference input: 309 mVrms FS: 2 Vrms (1 kHz, 0 dB) Input impedance: 47 kΩ
Analog Output	LINE (pin jack) × 1 Reference output: 309 mVrms FS: 2 Vrms (1 kHz, 0 dB) Output impedance: 1 kΩ (Load impedance: 10 kΩ)
Number of channels	Recording: 2 channels Playback: 2 channels
Other input/output connector	Digital audio optical output connector × 1 (PCM, Dolby Digital, DTS)
DV Input	IEEE 1394 Standard, 4pin
Others	
Dimensions	Approx. 430 (W) × 59 (H) × 252 (D) mm [Approx. 16 15/16" (W) x 2 3/8" (H) × 9 15/16" (D)]
Mass	Approx. 2.8 kg (6.16 lbs)
Operating Temperature range	5˚C - 40˚C (41˚F - 104˚F)
Operating Humidity range	10 %-80 % RH (no condensation)
Clock unit	Quartz-controlled 12-hour digital display
LASER Specification (Class Ⅰ LASER Product)	
Wave Length	780 nm(CDs), 662 nm(DVDs)
Laser Power	No hazardous radiation is emitted with the safety protection.
Solder	These models use lead free solder (PbF)

Notes : Mass and dimensions are approximate.
Specifications are subject to change without notice.

5 Location of Controls and Components

Main Unit



❶ POWER on/off button (POWER ⏻/I)
- Press to switch the unit from on to standby mode or vice versa. In the standby mode, the unit is still consuming a small amount of power.

❷ Connector for a digital video (DV) camcorder

❸ IN2 input terminals (IN2)

❹ Channel Select

❺ Stop button

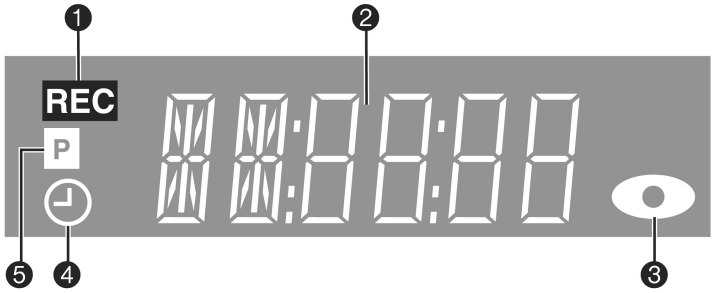
❻ Play/×1.3 button

❼ Reset button

❽ Start recording

❾ Disc tray open/close button

The Unit's Display



❶ Recording indicator

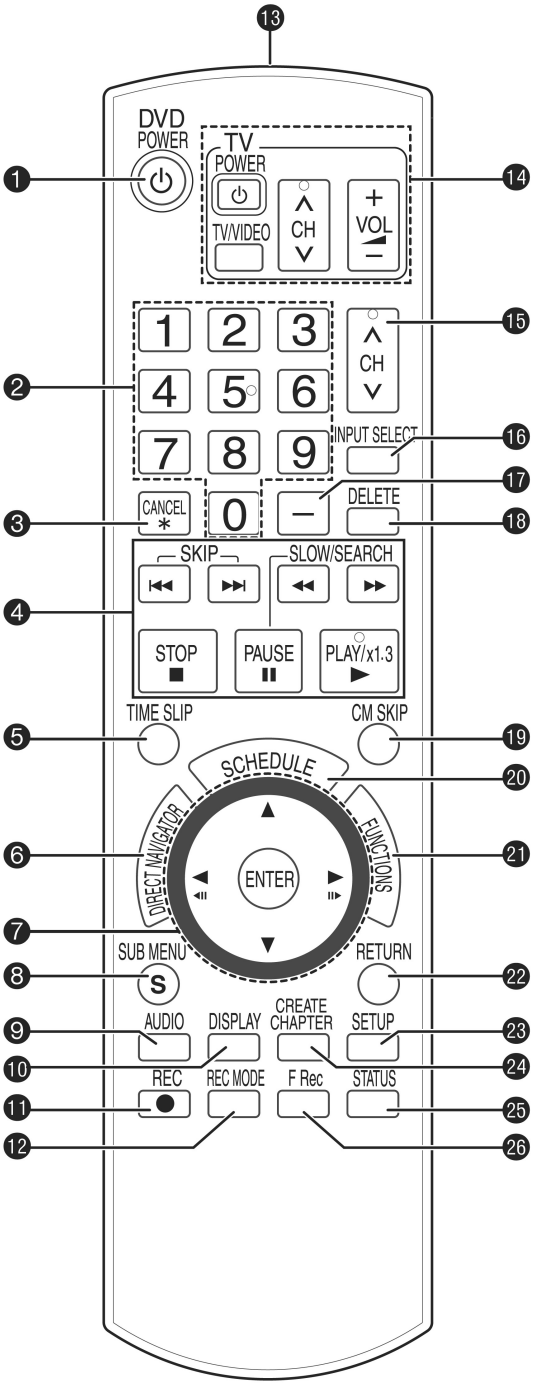
❷ Main display section

❸ Disc indicator
This indicator lights up when a disc that is supported by this unit is inserted.

❹ Scheduled recording indicator
On:
When a scheduled recording program is registered and a recordable disc is inserted.
Flashes:
The scheduled recording indicator flashes when the unit cannot go to scheduled recording standby (e.g. there is no disc, etc). It does not flash if Quick Start is off.

❺ Progressive indicator
This indicator lights up when you select "On" in "Progressive".

Remote Control



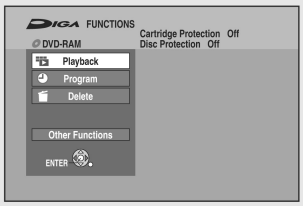
❶ Turn the unit on
❷ Select channels and recording numbers etc./ Enter numbers
❸ Cancel
❹ Basic operations for recording and play
❺ Skip the specified time
❻ Direct Navigator
❼ Selection/Enter, Frame-by-frame
❽ Show sub menu
❾ Select audio
❿ Show on-screen menu
⓫ Start recording
⓬ Change recording mode
⓭ Transmission window
⓮ TV and Set Top Box operations
⓯ Channel select
⓰ Input select (Tuner, Line1, Line2, DV)
⓱ Sub channel access for digital broadcasts
⓲ Delete items
⓳ Skip 1 minute forward
⓴ Show scheduled recording list
㉑ Show FUNCTIONS window .....(➔ below)
㉒ Return to previous screen
㉓ Show setup menu
㉔ Create chapters
㉕ Show status messages
㉖ Start Flexible Recording

FUNCTIONS Window

By using the FUNCTIONS window you may access the main functions quickly and easily.

With the unit stopped

❶ FUNCTIONS



– Different discs display different functions.

❷ ▲, ▼ to select a menu item, then ENTER

– If you select “Other Functions”, press [▲, ▼] to select a menu item and press [ENTER].

6 Operation Instructions

6.1. Taking out the Disc from DVD-Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1.1. Forcible Disc Eject

6.1.1.1. When the power can be turned off.

1. Turn off the power and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.1.1.2. When the power can not be turned off.

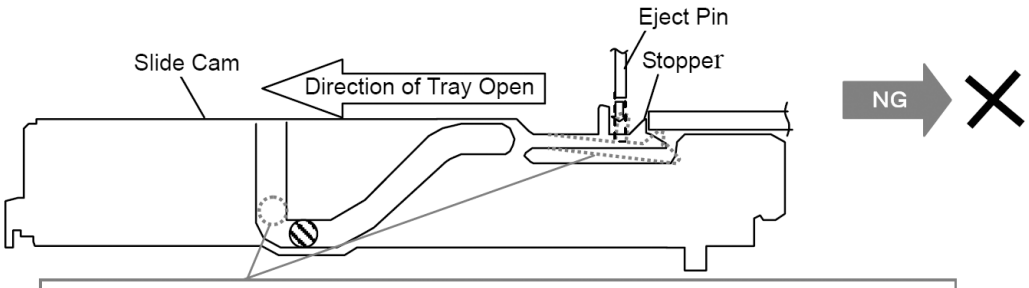
1. Press [POWER] key on the front panel for over 10 seconds to turn off the power forcibly, and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.1.2. When the Forcible Disc Eject can not be done.

Caution!

1: If you push strong and move the Slide Cam to counter direction of the arrow, the Stopper will be bended and Slide Cam won't stop at Stopper and will reach position for taking out Traverse Base. And Traverse Base might fall down later.

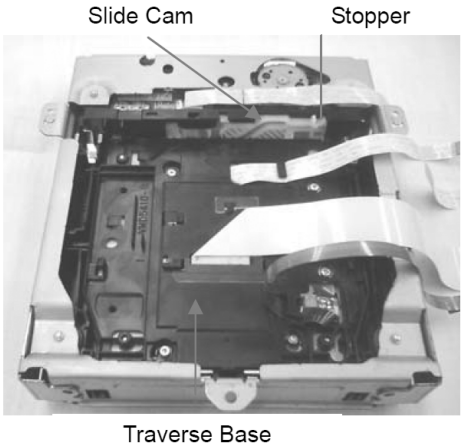
Absolutely, please do not move Slid Cam in the counter direction of the arrow.



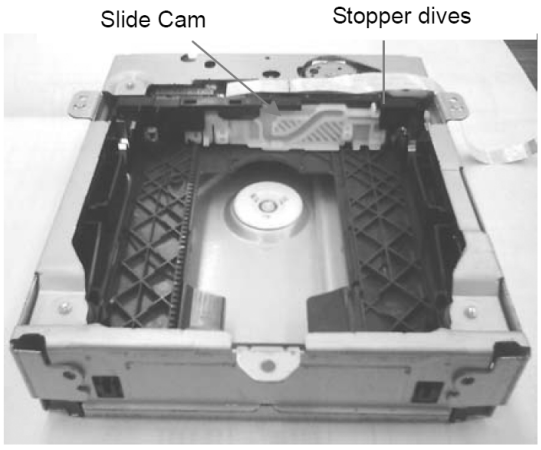
NG Position (Traverse Base might fall down later)

If you move the Slide Cam to counter direction of the arrow, Slide Cam won't stop at Stopper and will reach position for taking out Traverse Base. And Traverse Base might fall down later.

Before fall down of Traverse Base

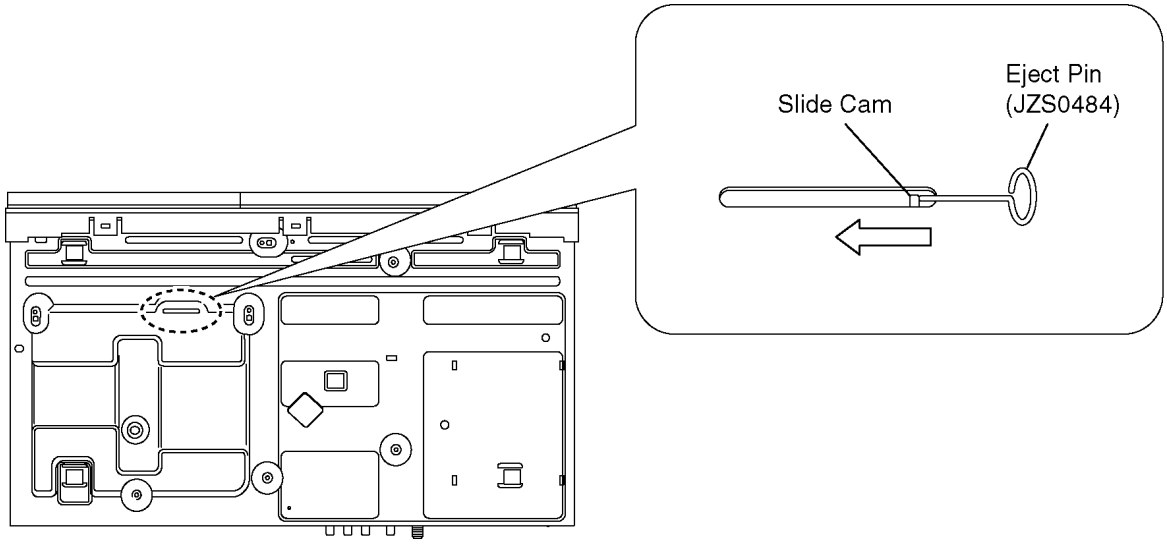


After fall down of Traverse Base

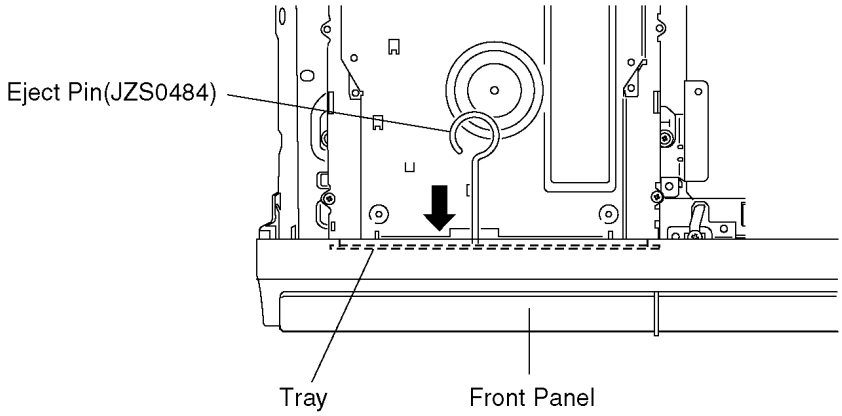


2: Moreover, the slide cam will be on irregular position against condition of the shipment if the tray is pushed by the hand after manual tray ejection is done, the hold of traverse Base becomes imperfect, and the danger of fall of traverse Base increases.
Absolutely, complete close of tray by electricity after manual tray ejection was done.
(Especially finish CLOSE function of tray by electricity when the product will be transported after inspection.

1. Turn off the power and pull out AC cord.
2. Remove the Top Case.
3. Put deck so that bottom can be seen.
4. Slide SLIDE CAM by Eject Pin (JZJ0484) or minus screw driver (small) in the direction of arrow to eject tray slightly.



5. Put deck upward, and push out Tray by Eject Pin (JZS0484) or minus screw driver (small).



7 Service Mode

7.1. Self-Diagnosis and Special Mode Setting

7.1.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by “Self-Diagnosis Display” when any error has occurred.

U, H** and F** are stored in memory and held.**

You can check latest error code by transmitting [0] [1] of Remote Controller in Service Mode.

Automatic Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
U30	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	RC * “*” is remote controller code of the main unit. Display for 5 seconds.
U59	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	U59 “U59 is displayed for 30 minutes.
U61	The unit is carrying out its recovery process. (with no disc in the disc tray)	・The unit detected an error while recording or playing with no disc in the disc tray. The unit is carrying out its recovery process. This process restores the unit to normal operation. The unit is not broken. Wait until the message disappears.	No display	U61
U88	The unit is carrying out its recovery process. (with a disc in the disc tray)	・The unit detected an error while recording or playing with a disc in the disc tray. The unit is carrying out its recovery process. This process restores the unit to normal operation. The unit is not broken. Wait until the message disappears.	No display	U88
U99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	U99 Displayed is left until the [POWER] key is pressed.
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	No display
F58	Drive hardware error	When drive unit error is detected, the event is saved in memory.	No display	No display
F34	Initialization error when main microprocessor is started up for program recording	When initialization error is detected after starting up main microprocessor for program recording, the power is turned off automatically. The event is saved in memory.	No display	No display
UNSUPPORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally in case of the disc is dirty.	**“This disc is incompatible.”**	UNSUP ↓ POrt Display for 5 seconds.
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	**“Cannot read. Please check the disc.”**	NO ↓ REAd

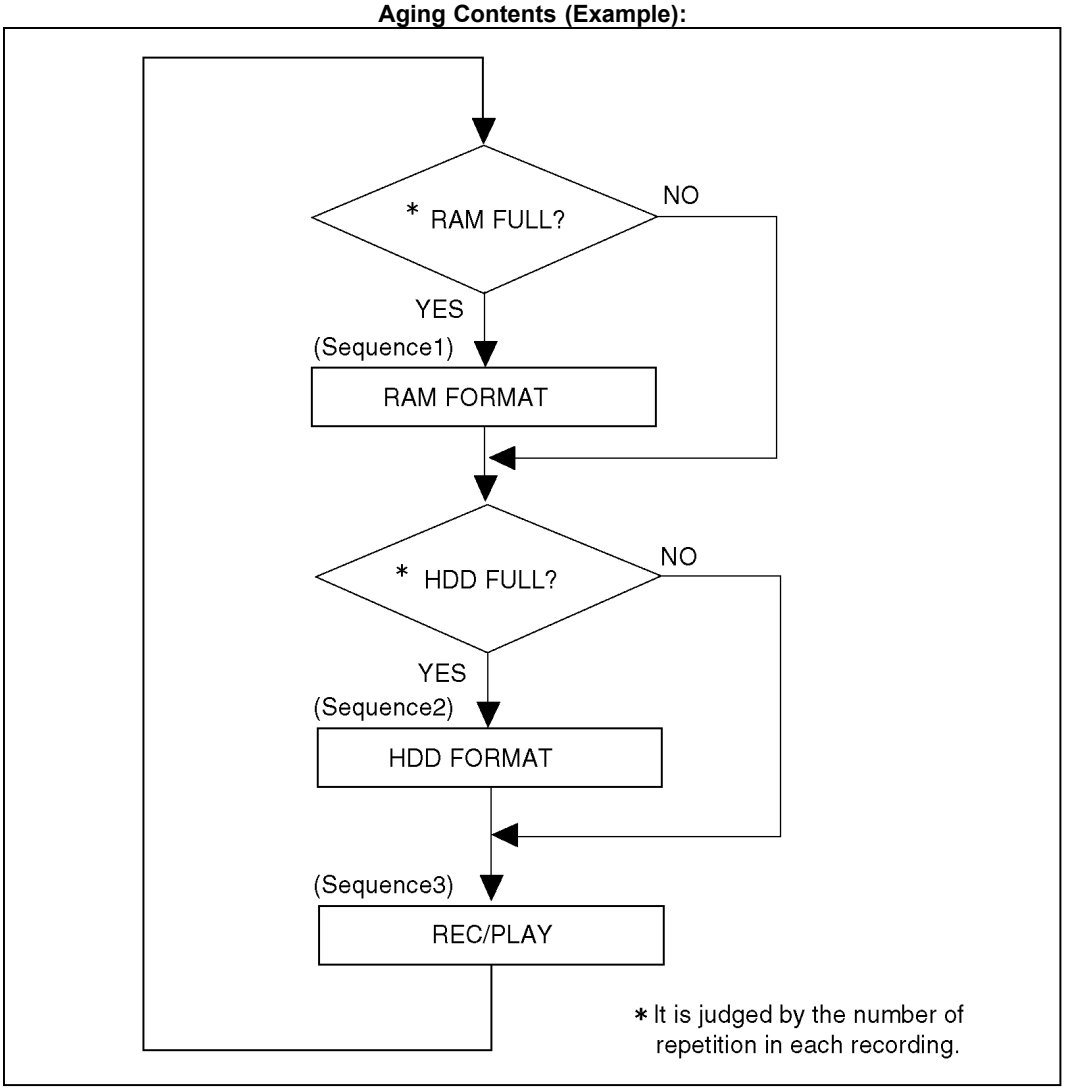
Error Code	Diagnosis contents	Description	Monitor Display	Automatic FL display
HARD ERR	Drive error	The drive detected a hard error.	"**DVD drive** error."	Display for 5 seconds. HArd ↓ Err
No REC	Recording is impossible	[No REC] is displayed when recording is impossible due to the defect, dirt or wound of media.	No display	WR ItE ↓ Err
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B.	No display	0 ↓ 0000 "0" is displayed one by one.
PLEASE WAIT	Unit is in termination process	Unit is in termination process now. "BYE" is displayed and power will be turned off. In case "Quick Start" of setup menu is ON, it is displayed in restoration operation for AC off.	No display	0 ↓ 0000
UNFORMAT	Unformatted disc error	You have inserted an unformatted DVD-RAM or DVD-RW that is unformatted or recorded on other equipment.	Format This disc is not formatted properly. Format the disc in DISK MANAGEMENT?	UNFOr ↓ MAt

7.1.2. Special Modes Setting

Item		FL display	Key operation
Mode name	Description		Front Key
TEST Mode	*All the main unit´s parameters are initialized.	TM L1	Press [STOP], [CH UP] and [OPEN/CLOSE] keys simultaneously for five seconds when power is off.
Rating password	The audiovisual level setting password is initialized to "Level 8".	No display	When the power is on (E-E mode). Open the tray, and press [REC] and [PLAY] simultaneously for 5 seconds.
Service Mode	Setting every kind of modes for servicing. *Details are described in "**7.1.3. Service Mode at a glance**".	SM	When the power is off, press [CH UP], [OPEN/CLOSE] and [REC] keys simultaneously for 5 seconds.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. *During Schedule Recording, Forced disc eject is invalid. *This command is not effective during "Child lock" is ON. While Demonstration Lock is being set, this Forced disc eject function is not accepted.	The display before execution leaves. ******	When the power is off, press [STOP] and [CH UP] keys simultaneously for 5 seconds.
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly. *When Schedule Recording is ON, execute "Forced Power-off" after releasing Schedule Recording.	Display in P-off mode.	Press [Power] key over than 10 seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Aging	Perform sequence of modes as * Aging Description shown below continually. **Caution:** **All programs in DVD-RAM disc will be deleted because Formatting is done once in Aging process.**	Display following the then mode.	Insert DVD-RAM disc. When the power is ON, press [STOP], [POWER] and [OPEN/CLOSE] simultaneously for over 5 seconds and less than 10 seconds. **NOTE1:** If Unit has not turned into Aging mode by operations shown above, execute TEST MODE once and re-execute operation shown above. (*All the main unit's parameters are initialized by TEST mode.) **NOTE2:** If the unit has hung-up because of pressing keys for over 10 seconds, once turn off the power, and re-execute this command. *When releasing Aging mode, press [POWER] key, AC-OFF.

Aging Contents (Example):



*XP mode ・・・・・repeat once
SP mode ・・・・・repeat 2 times
LP mode ・・・・・repeat 4 times
EP mode ・・・・・repeat 12 times

Item		FL display	Key operation
Mode name	Description		Front Key
Demonstration lock/unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by “Main unit initialization” of service mode.	*When lock the tray. LK On “LOCK” is displayed for 3 seconds.	When the power is on, press [STOP] and [POWER] keys simultaneously for 5 seconds.
		*When unlock the tray. LK OFF “UNLOCK” is displayed for 3 seconds.	When the power is on, press [STOP] and [POWER] keys simultaneously for 5 seconds.
		*When press OPEN/CLOSE key while the tray being locked. LK On Display “LOCK” for 3 seconds.	Press [OPEN/CLOSE] key while the tray being locked.
ATP Initialization	ATP setting and all parameters (including clock) are initialized, and the unit turns off automatically.	It is same with display in stop mode.	When the power is on (E-E mode), press [CH UP] and [CH DOWN] simultaneously for 5 seconds.
Progressive initialization	The progressive setting is initialized to Interlace.	The display before execution leaves. ******	When the power is on (E-E mode), press [STOP] and [PLAY] simultaneously for 5 seconds.

7.1.3. Service Modes at a glance

Service mode setting: While the power is off, press **REC, CH UP and OPEN / CLOSE** simultaneously for five seconds.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Release Items	Item of Service Mode executing is cancelled.	SM	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U/H/F held by Timer is displayed on FL. *Details are described in **"7.1.1. Self-Diagnosis Functions".**	♣□□ *♣ shows U/H/F. □□ shows number. If any error history does not exist, [F00] is displayed.	Press [0] [1] in service mode
ROM Version Display	1. Region code (displayed for 5 sec.) 2. Main firm version (displayed for 5 sec.) 3. Timer firm version (displayed for 5 sec.) 4. Drive firm version (displayed for 5 sec.) 5. ROM correction version (left displayed)	1. NO* 2. ****** 3. ****** 4. **** 5. *** * are version displays.	Press [0] [2] in service mode
White Picture Output	White picture is output as component Output from AV Decoder. *White picture (Saturation rate : 100%) *It is enable to switch Interlace/Progressive by "I/P switch: [1] [4]"	*Initial mode is "Interlace". WH it	Press [1] [1] in service mode.
		Switch Interlace/Progressive WH itP	Press [1] [4] in White Picture Output mode. *I/P are switched alternately.
Magenta Picture Output	Magenta picture is output with Component Output from AV Decoder. *Magenta picture (Saturation rate: 100%) *It is enable to switch Interlace/Progressive by "I/P switch: [1] [4]"	*Initial mode is "Interlace". MAGE	Press [1] [2] in service mode.
		Switch Interlace/Progressive MAGE P	Press [1] [4] in Magenta Picture Output mode. *I/P are switched alternately.
I/P Switch	Switch Interlace and Progressive in EE mode. *Initial setting is "Interlace". *This command is effective during executing "White Picture Output", "Magenta Picture Output" mode.	Initial mode is Interlace SM P Switch Interlace/Progressive SM I	Press [1] [4] in I/P Switch mode. *I/P are switched alternately.
Audio Mute (XTMUTE)	Check whether mute is applied normally by the timer microprocessor.	X T	Press [2] [1] in service mode.
Audio Mute (XDMUTE)	Check whether mute is applied normally by the Digital P.C.B..	X D	Press [2] [2] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Audio Pattern Output	The audio pattern stored in the internal memory is output (Lch: 1kHz/-18dB) (Rch: 400Hz/-18dB) *Audio sound clock switching operation of DAC can be confirmed by sub command [2] [4].	Initial mode (Audio 48kHz) AU 48	Press [2] [3] in service mode.
		Audio 44.1kHz/48kHz switching AU 44	Press [2] [4] in Audio Pattern Output mode. *48 kHz / 44.1 kHz are switched alternately.
Laser Used Time Indiction	Check laser used time (hours) of drive.	* ●(*****) is the used time display in hour. ●Laser used time of DVD/ CD in Playback/Recording mode is counted.	Press [4] [1] in service mode.
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	CLr 1	Press [9] [5] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
RAM Drive Last Error	RAM Drive error code display. *For details about the drive error code, refer to the Service Manual for the specific RAM Drive.	1. Error Number is displayed for 5 seconds. NO ** 2. Time when the error has occurred (1/2) is displayed for 5 seconds. YYMMDD YY: Year MM: Month DD: Day 3. Time when the error has occurred (2/2) is displayed for 5 seconds. hhmmss hh: Hour mm: Minute ss: Second 4. Last Drive Error code No.1 is displayed for 5 seconds. ****** 00: Bad disc 03: Bad disc 04: Bad disc or drive malfanction 5. Last Drive Error code No.2 (1/2) is displayed for 5 seconds. (This Error Code is unnecessory for service.) **** 6. Last Drive Error code No.2 (2/2) is displayed for 5 seconds. (This Error Code is unnecessory for service.) **** 7. Error occurring Disc type is displayed for 5 seconds. DISC * DISC 1: DVD DISC 2: CD DISC 3: DVD-RAM 2.6GB DISC 4: DVD-RAM 4.7GB DISC 5: DVD-R DISC : Unknown Disc 8. Unused (No display) 9. Factor of Drive Error occurring is left displayed ******	Press [4] [2] in service mode. When “INFO******” is being displayed, past 99 error histories can be displayed by pressing [0] [1] - [9] [9]
Delete the Last Drive Error	Delete the Last Drive Error information stored on the DVD RAM-Drive.	CLr 2	Press [9] [6] in service mode.

<table>
<tr><th colspan="2">Item</th><th rowspan="2">FL display</th><th rowspan="2">Key operation
(Remote controller key)</th></tr>
<tr><th>Mode name</th><th>Description</th></tr>
<tr><td>Laser power confirmation</td><td>Drive state is judged based on difference between laser power value at shipping and present laser power value.</td><td>TESt ＊
＊ is judgment result
<table>
<tr><th>＊</th><th>Power value difference</th><th>Evaluation</th></tr>
<tr><td>0</td><td>1mW or less</td><td>Very good.</td></tr>
<tr><td>1</td><td>2mW or less</td><td>Good.</td></tr>
<tr><td>2</td><td>3mW or less</td><td>Bad.</td></tr>
<tr><td>3</td><td>4mW or more</td><td>Very bad.</td></tr>
</table>
If DVD-RAM disc in not inserted, [NO DISC] is displayed.
If power value study was failed, [NG] is displayed.</td><td>1. Insert DVD-RAM disc into RAM Drive in service mode. (Other media are assumed to be non-correspondence.)
2. Press [4] [4].</td></tr>
<tr><td>Turn on all FL/LEDs</td><td>All segments of FL and all LEDs are turned on.</td><td>All segments are turned on.</td><td>Press [5] [1] in service mode.</td></tr>
<tr><td>S1 signal output</td><td>Forcibly superimpose the S1 signal (approx. 4.5V DC) on the EE chroma signal, and check the output on the S terminal.</td><td>S1</td><td>Press [5] [2] in service mode.</td></tr>
<tr><td>S2 signal output</td><td>Forcibly superimpose the S2 signal (approx. 2V DC) on the EE chroma signal, and check the output on the S terminal.</td><td>S2</td><td>Press [5] [3] in service mode.</td></tr>
<tr><td>Front connection inspection</td><td>Press all front keys and check the connection between Main P.C.B. and Front key Switches.</td><td>0r ＊＊
(1) (2)
(1) Each time a key is pressed, segment turned on increases one by one.
(2) Total number of keys that have been pressed.</td><td>Press [5] [4] in service mode.
*When finish this mode, Press [Power] for 10 seconds.</td></tr>
<tr><td>Production Date Display</td><td>Display the date when the unit was produced.</td><td>YYMMDD
YY: Year
MM: Month
DD: Day</td><td>Press [6] [1] in service mode.</td></tr>
<tr><td>Display the accumlated working time</td><td>Display the accumulated unit´s working time.</td><td>＊＊＊＊＊＊
(Indicating unit: Second)</td><td>Press [6] [4] in service mode.</td></tr>
</table>

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Display the Error History	Display the Error History stored on the unit.	Display reason of error for 5 seconds. NO ** 01: Defect of Digital P.C.B. (AV DEC / MAIN CPU) 02: Defect of RAM Drive. 03: Defect of Disc. 04: Defect of Digital P.C.B. or Communication Error. 05: Defect of Digital P.C.B. (AV DEC / MAIN CPU) 06: Defect of HDD. Display the time when the error has occured (1/2) for 5 seconds. YYYYMM YYYY: Year MM: Month Display the time when the error has occured (2/2) for 5 seconds. hhmmss hh: Hour mm: Minute ss: Second Accumulated working time till occuring of the error is left displayed. ****** (Indicating unit: Second)	Press [6] [5] in service mode. Then press [0] [1] ~ [1] [9], the past 19 error histories are displayed.
Delete the Error History	Delete Error History information stored on the unit.	CLr 3	Press [9] [7] in service mode.
Tray OPEN/CLOSE Test	The RAM drive tray is opened and closed repeatedly.	****** * is number of open/close cycle times.	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button of Remote Controller more than 10 seconds.
Error code initialization	Initialization of the last error code held by timer (Write in F00)	CLr 4	Press [9] [8] in service mode.
Initialize Service	Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.	CLr 5	Press [9] [9] in service mode.
Finishing service mode	Release Service Mode.	Display in STOP (E-E) mode. ******	Press power button on the front panel or Remote controller in service mode.

8 Service Fixture & Tools

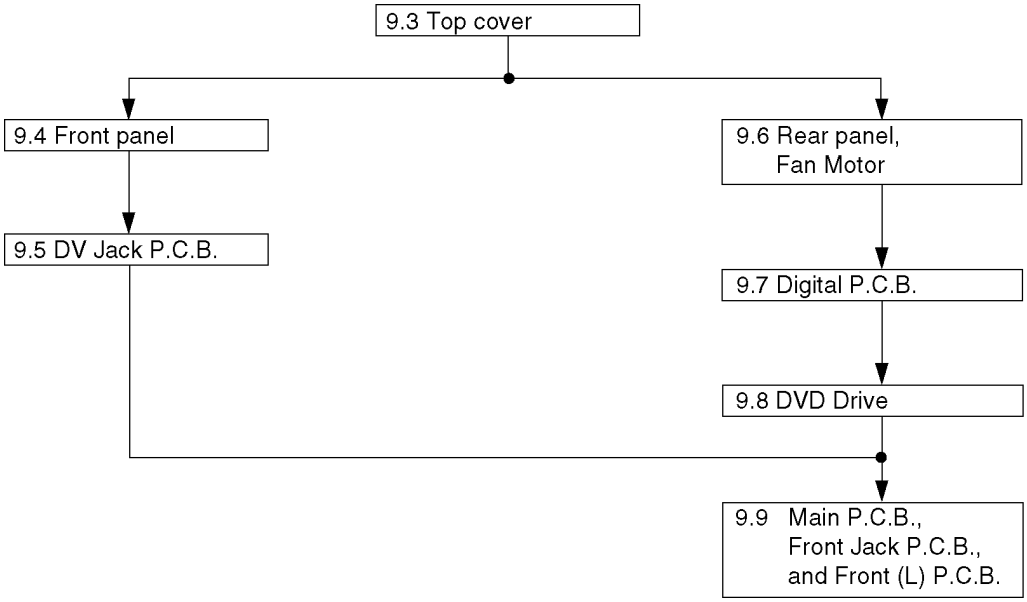
Part Number	Description	Compatibility
RFKZ0260	Extension Cable (MainP.C.B. - Digital P.C.B. / 88 Pin)	Same as ES15/EH55 Series
RFKZ0366	Extension FFC (DVD Drive - Digital P.C.B. / 40 Pin)	Same as EH55 Series
RFKZ0169	Extension Cable (DVD Drive - Main P.C.B. / 4 Pin)	Same as E100H Series
RFKZ0168	Extension Cable (Fan Motor - Main P.C.B. / 3 Pin)	Same as ES15/EH55 Series
JZS0484	Eject Pin	Same as EH55/EH75V/ES35V Series
RFKZ03D01K	Lead Free Solder (0.3mm/100g Reel)	Same as EH55/EH75V/ES35V Series
RFKZ06D01K	Lead Free Solder (0.6mm/100g Reel)	Same as EH55/EH75V/ES35V Series
RFKZ10D01K	Lead Free Solder (1.0mm/100g Reel))	Same as EH55/EH75V/ES35V Series
RFKZ0316	Solder Remover (Lead free low temperature Solder/50g)	Same as EH55/EH75V/ES35V Series
RFKZ0328	Flux	Same as EH55/EH75V/ES35V Series
RFKZ0329	Bottle of Flux	Same as EH55/EH75V/ES35V Series

9 Assembling and Disassembling

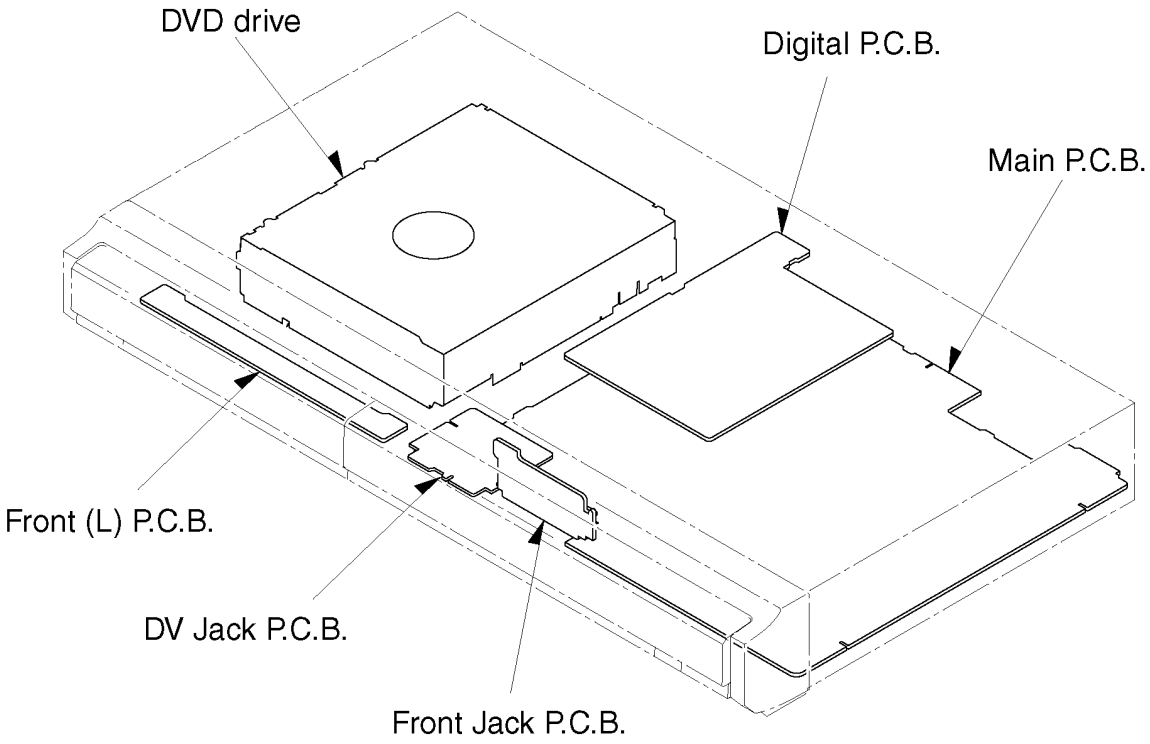
9.1. Disassembly Flow Chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.

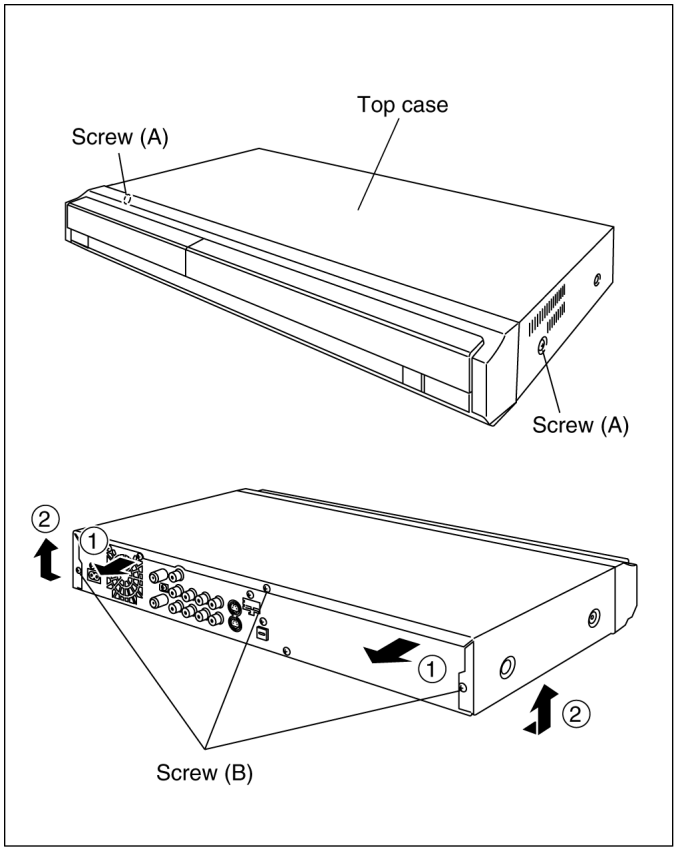


9.2. P.C.B. Positions



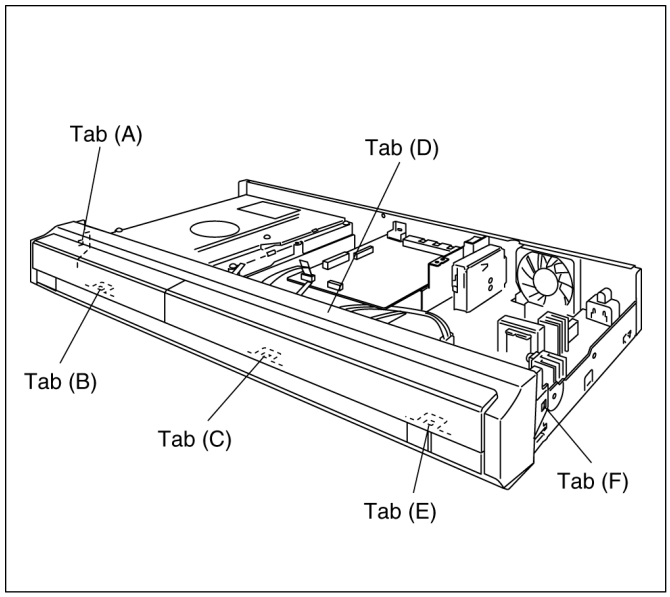
9.3. Top cover

1. Remove the 2 screws (A) and 3 screws (B).
2. Slide Top Case rearward and open the both ends at rear side of the Top Case a little and lift the Top Case in the direction of the arrows.



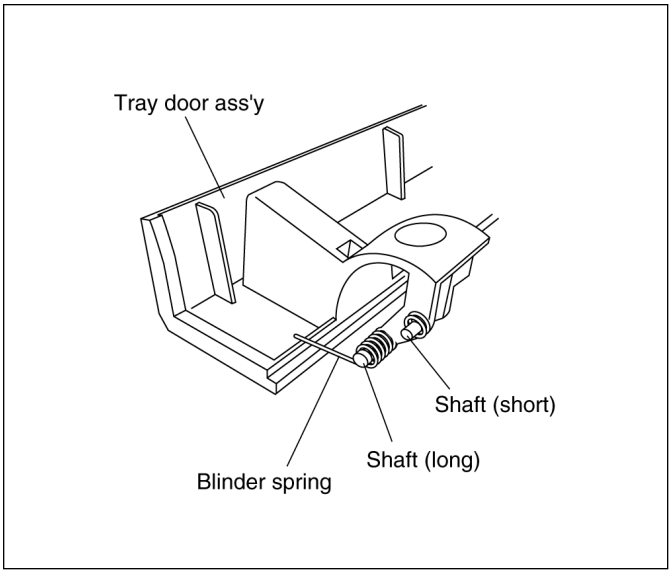
9.4. Front Panel

1. Unlock 6 tabs in (A) - (F) turn.
   Pull with the front panel in the direction of your side.

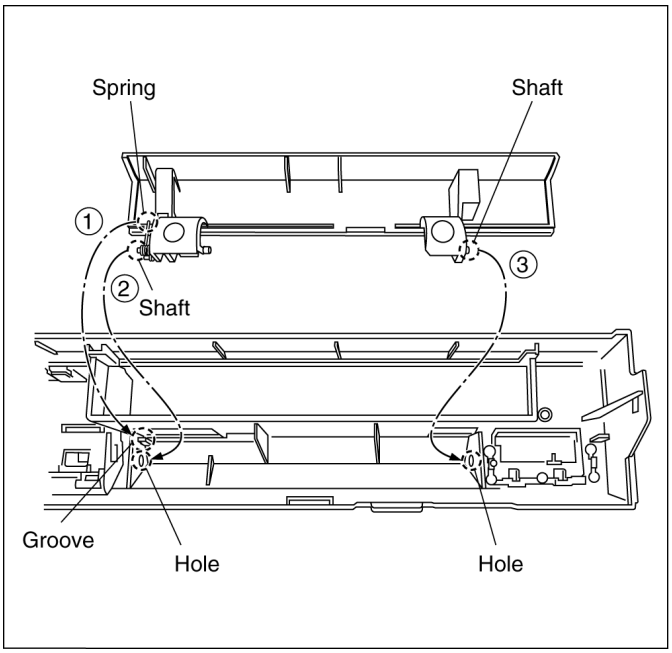


9.4.1. How to assemble Tray door ass'y

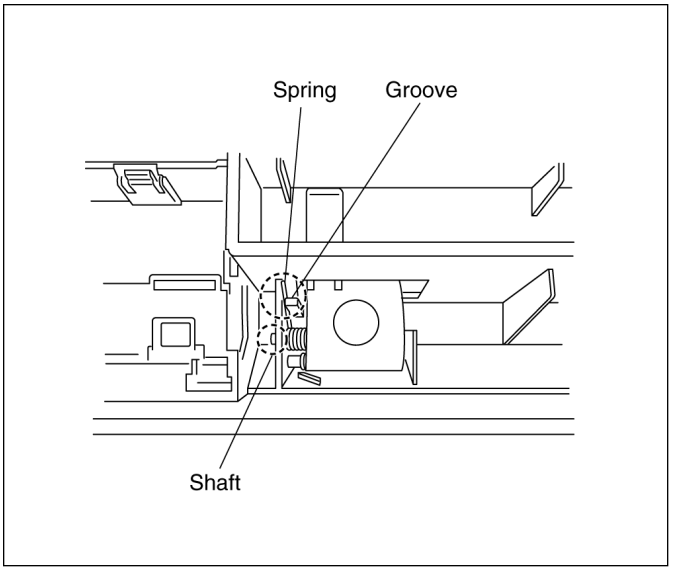
1. Attach Blinder spling to Tray door ass'y.



2. Attach Tray door ass'y in order from 1 to 3.
   a. 1: Put the Brinder spring on the groove.
   b. 2: Insert the shaft in the hole.
   c. 3: Insert the shaft in the hole.

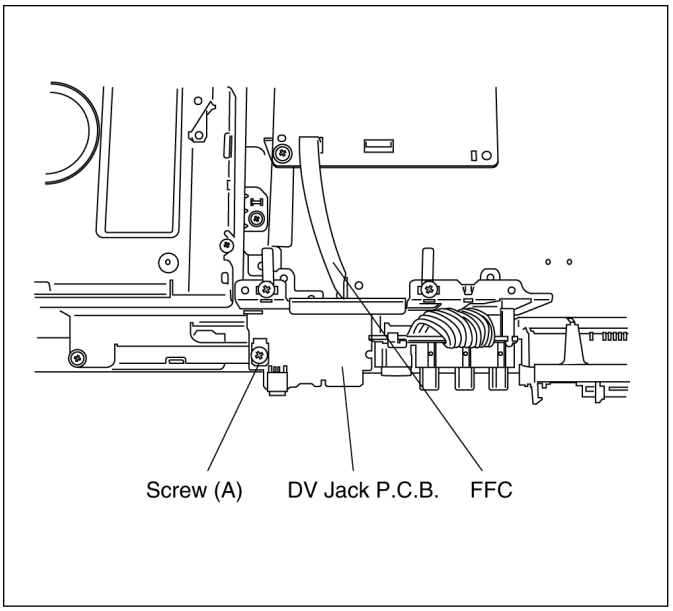


3. Confirm the Brinder spring is attached as following.



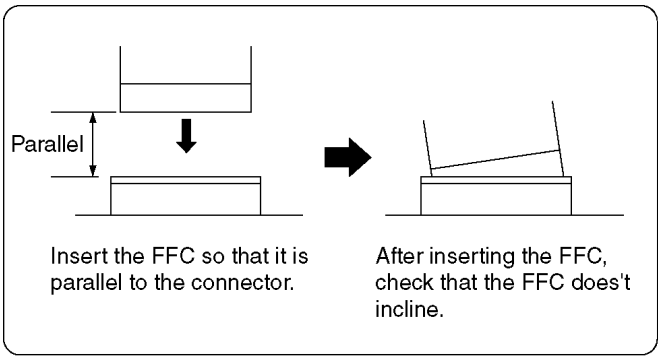
9.5. DV Jack P.C.B.

1. Remove a Screw (A) and FFC to remove DV jack P.C.B.



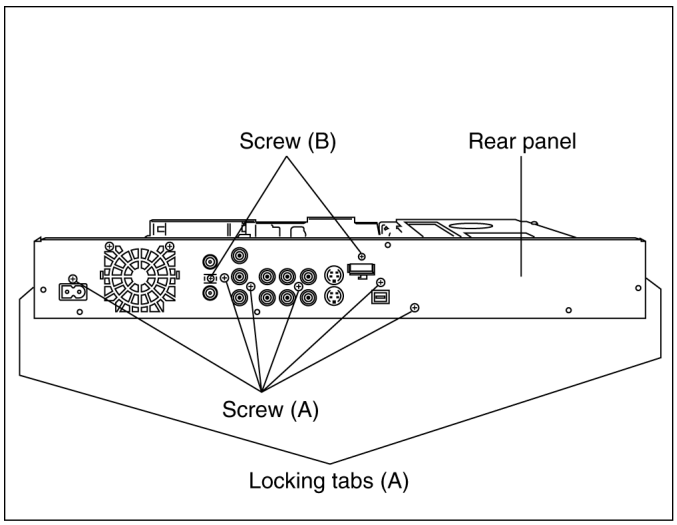
CAUTION:

When replacing Digital P.C.B., pay attention as below.



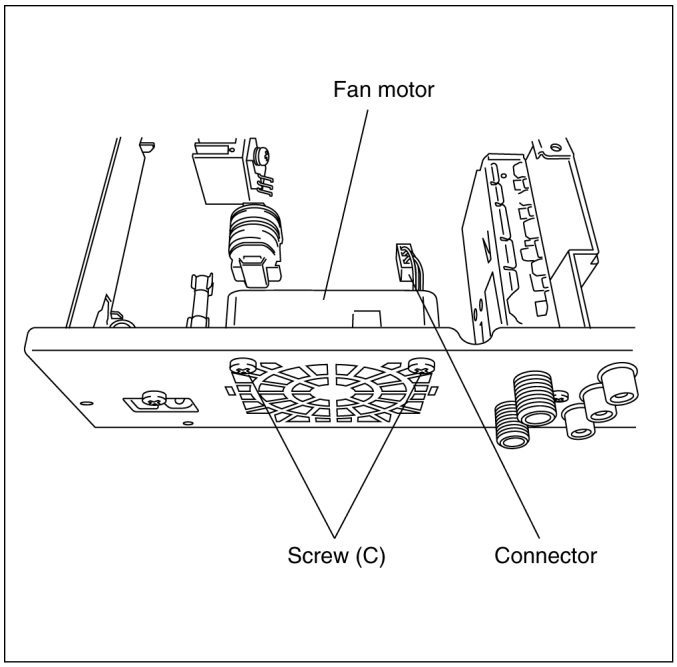
9.6. Rear Panel

1. Remove 6 Screws (A) and 2 Screws (B).
2. Unlock 2 Locking Tabs (A) to remove Rear Panel.



9.6.1. Only Fan Motor

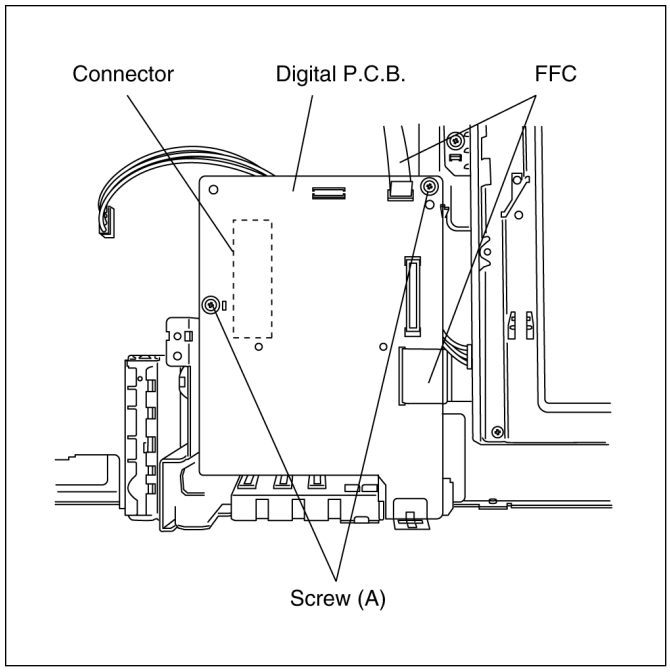
1. Remove the 2 Screws (C) and connector, remove the Fan motor.



9.7. Digital P.C.B.

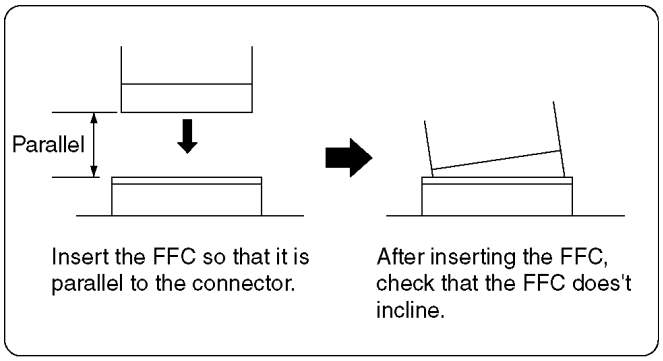
1. Remove 2 Screws (A) and 2 FFCs.

   And lift up Digital P.C.B. slightly so to disconnect connectors to remove Digital P.C.B..



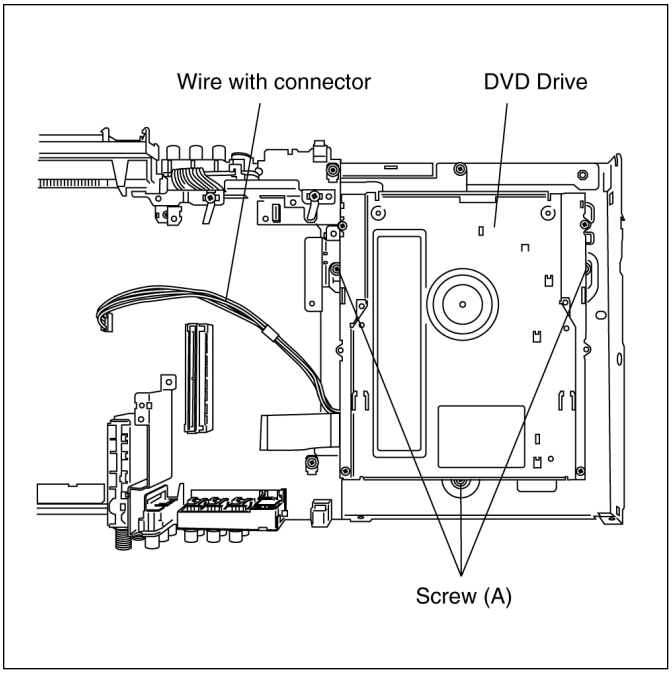
CAUTION:

When replacing Digital P.C.B., pay attention as below.



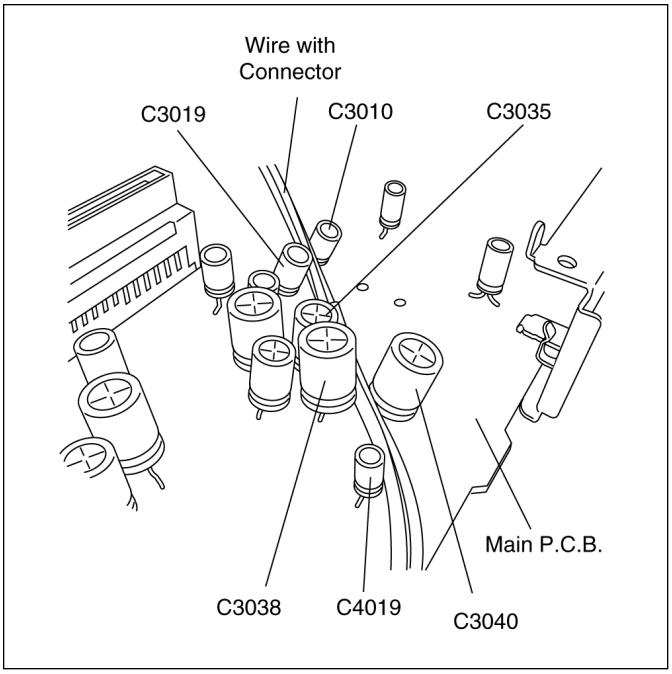
9.8. DVD Drive

1. Remove 3 Screws (A) and wire with connector to remove DVD Drive.



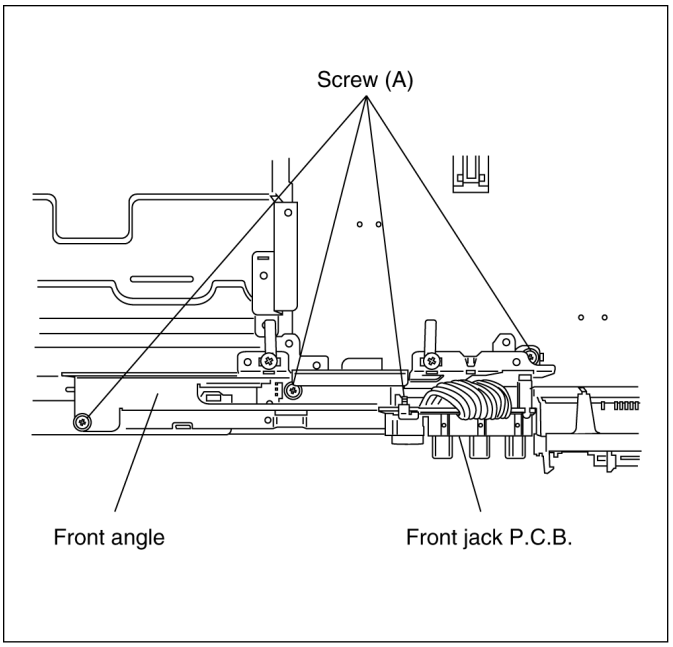
Caution when assembling DVD drive.

When assembling DVD drive, draw around wire with connector between capacitors on Main P.C.B. as following.

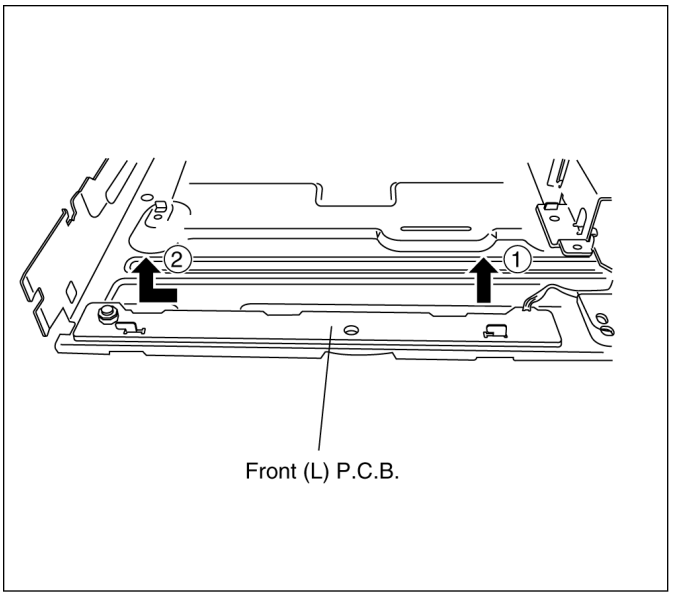


9.9. Main P.C.B., Front jack P.C.B. and Front (L) P.C.B.

1. Remove 4 Screws (A) to remove Front angle and Front jack P.C.B..

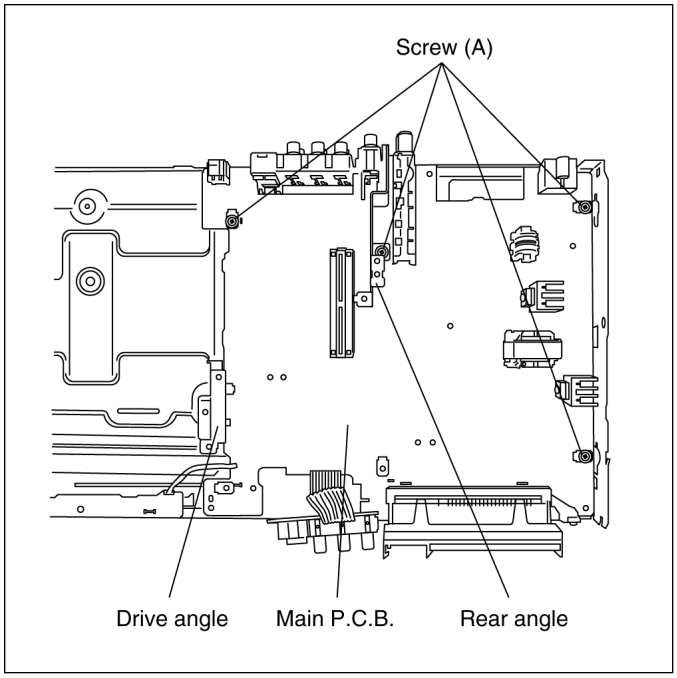


2. Remove Front (L) P.C.B. in the direction of arrows.



3. Remove Drive angle.

   Remove 4 Screws (A) and Rear angle to remove Main P.C.B..



10 Measurements and Adjustments

10.1. Service Positions

Note:

For description of the disassembling procedure, see the section 9.

10.1.1. Checking and Repairing Digital P.C.B.

1. Top Case

- Remove 2 Screws (A) on side
- Remove 3 rear Screws (B) on rear
- Remove Top Case

2. Front Panel

- Unlock 1 Locking Tab on upper
- Unlock 2 Locking Tabs on side
- Unlock 3 Locking Tabs on bottom
- Remove Front Panel

3. Digital P.C.B.

- Remove FFC from DVD-RAM Drive
- Remove FFC from DV Jack P.C.B.
- Remove 1 Screw (A), 2 Screws (B) fixing Digital P.C.B.
- Remove Digital P.C.B.

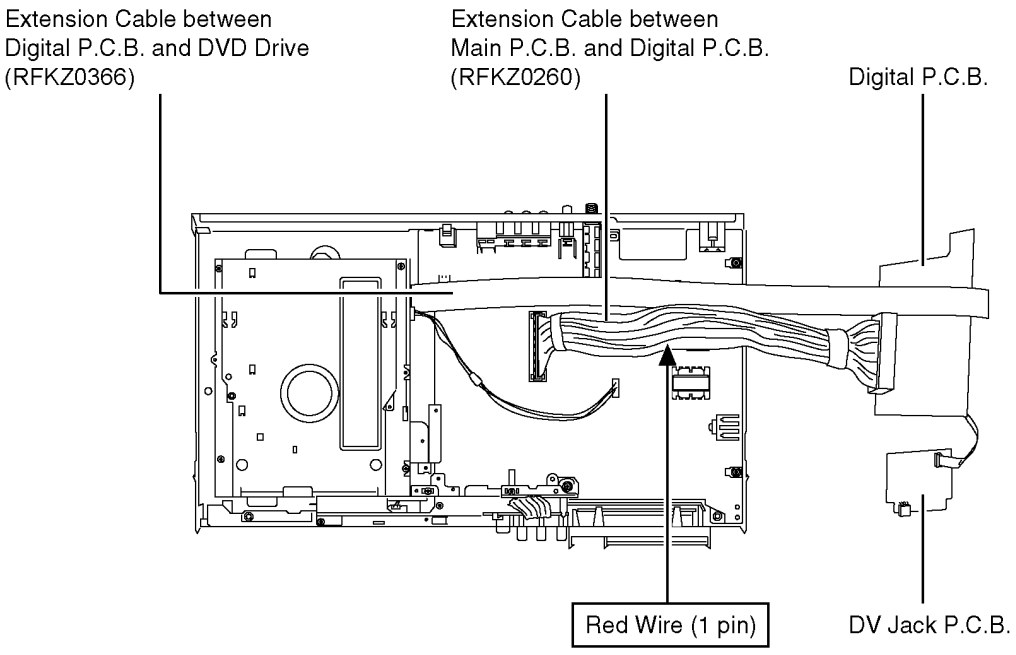
4. DV Jack P.C.B.

- Remove 1 Screw fixing DV Jack P.C.B.
- Remove DV Jack P.C.B.

Connecting to DV Jack P.C.B. with original FFC.
Remove 3 Screws fixing DVD Drive.

Right up DVD Drive slightly and connect Extension Cable between DVD Drive and Digital P.C.B. (RFKZ0366).
Connect Extension Cable between Main P.C.B. and Digital P.C.B. (RFKZ0260).

Caution:
Red wire in the extension cable should be connected to (1) pin.



10.1.2. Checking and Repairing of Main P.C.B.

1. Top Case

- Remove 2 Screws (A) on side
- Remove 3 rear Screws (B) on rear
- Remove Top Case

2. Front Panel

- Unlock 1 Locking Tab on upper
- Unlock 2 Locking Tabs on side
- Unlock 3 Locking Tabs on bottom
- Remove Front Panel

3. Digital P.C.B.

- Remove FFC from DVD-RAM Drive
- Remove FFC from DV Jack P.C.B.
- Remove 1 Screw (A), 2 Screws (B) fixing Digital P.C.B.
- Remove Digital P.C.B.

4. DV Jack P.C.B.

- Remove 1 Screw fixing DV Jack P.C.B.
- Remove DV Jack P.C.B.

5. DVD-RAM Drive

- Remove Cable between DVD Drive and Main P.C.B.
- Remove 3 Screws fixing DVD Drive
- Remove DVD Drive

6. Rear Panel

- Disconnect Fan Connector
- Remove 7 Screws (One is for Tuner)
- Unlock 2 Locking Tabs on side
- Remove Rear Panel

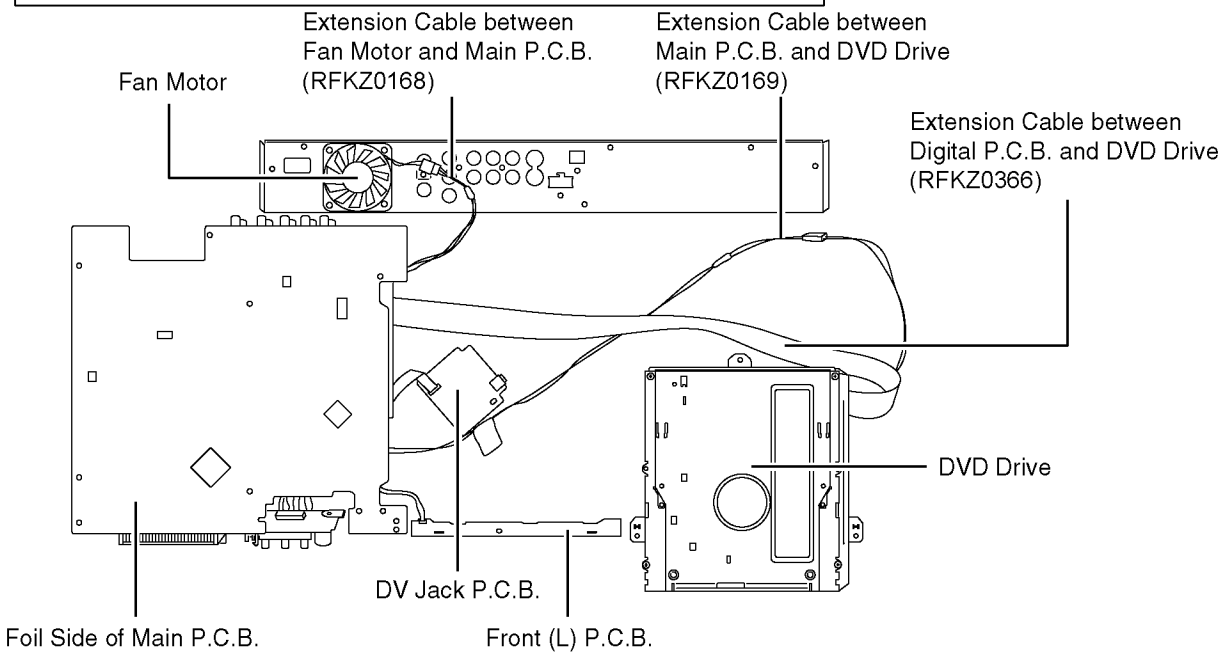
7. Front (L) P.C.B.,Front Jack P.C.B. and Main P.C.B.

- Remove 4 Screws (One is for Front Jack P.C.B.)
- Remove Jack Angle and Front (L) P.C.B.
- Remove 4 Screws to remove Main P.C.B.

Connecting to DV Jack P.C.B. with original FFC.
Attach Digital P.C.B. to Main P.C.B..
Remove Front (L) and Main P.C.B. from chassis and put Front (L) and Main P.C.B. so that it's foil side face top.

Connect Extension Cable between DVD Drive and Digital P.C.B. (RFKZ0366).
Connect Extension Cable between Main P.C.B. and DVD Drive (RFKZ0169).
Connect Extension Cable between Main P.C.B. and Fan Motor (RFKZ0168).

Caution:
Red wire in the extension cable should be connected to (1) pin.


Extension Cable between Fan Motor and Main P.C.B. (RFKZ0168)
Extension Cable between Main P.C.B. and DVD Drive (RFKZ0169)
Fan Motor
Extension Cable between Digital P.C.B. and DVD Drive (RFKZ0366)
DVD Drive
DV Jack P.C.B.
Foil Side of Main P.C.B.
Front (L) P.C.B.

10.2. Notice after replacing Digital P.C.B.

[TM L1] is displayed after replacing Digital P.C.B.

Once power off, and start up again.

10.3. When the unit does not operate normally after replacing the Timer Microprocessor or Main P.C.B.

When the unit does not operate normally after replacing the Timer Microprocessor or Main P.C.B. with new one, reset Timer Microprocessor.

Step	Operation	Descriptions
1	While power is ON, short TL7507 (RESET) and the TL7506 (GND) momentarily.	"RESET (L)" is transmitted to the X-REST of Timer Microprocessor (IC7501-8 pin), then the unit operates normally.

10.4. Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

After making repairs, we recommend performing the following inspection, to check normal operation.

<table>
<tr><th>No.</th><th>Procedure</th><th>Item to Check</th></tr>
<tr><td>1</td><td>Turn on the power, and confirm items pointed out.</td><td>Items pointed out should reappear.</td></tr>
<tr><td>2</td><td>Insert RAM disc.</td><td>The Panasonic RAM disc should be recognized.</td></tr>
<tr><td>3</td><td>Enter the EE (TU IN / AV IN - AV OUT) mode.</td><td>No abnormality should be seen in the picture, sound or operation.</td></tr>
<tr><td>4</td><td>Perform auto recording and playback for one minute using the RAM disc.</td><td>No abnormality should be seen in the picture, sound or operation.
*Panasonic DVD-RAM disc should be used when recording and playback.</td></tr>
<tr><td>5</td><td>If a problem is caused by a VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.</td><td>No abnormality should be seen in the picture, sound or operation.</td></tr>
<tr><td>6</td><td>Models with SD Card Slot or DV Input Jack: In case of that the trouble is caused by SD card and/or DV terminal.</td><td>Models with SD Card or DV Input Jack;
1) SD Card: Check to be able to display and copy the picture.
2) DV terminal: Check to be able to record from DVC.</td></tr>
<tr><td>7</td><td>After checking and making repairs, upgrade the firmware to the latest version.</td><td>Make sure that [UPD OK] appears in the FL displays.</td></tr>
<tr><td>8</td><td>Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).</td><td>Make sure that [CLR] appears in the FL display.
After checking it, turn the power off.</td></tr>
</table>

Caution for updating Firmware

Firmware of this model is compulsively changed even if new version has already been installed in product.
UNFORMAT in not displayed.
Please confirm firm version of the product before update, to avoid making down version.

step1. Confirm firm version of the product
a). Press [CH UP] + [OPEN/CLOSE] + [REC] buttons of product simultaneously for 5 seconds to turn it in Service Mode.
b). Press [0] [2] of the remote controller.
Region code/ MAIN firm version/ TIMER firm version/ DRIVE firmware version/ ROM Correction version is displayed in this order.

step2. Compare Main firm version and Drive firm version of FL display with versions of updating disc.

For Example:

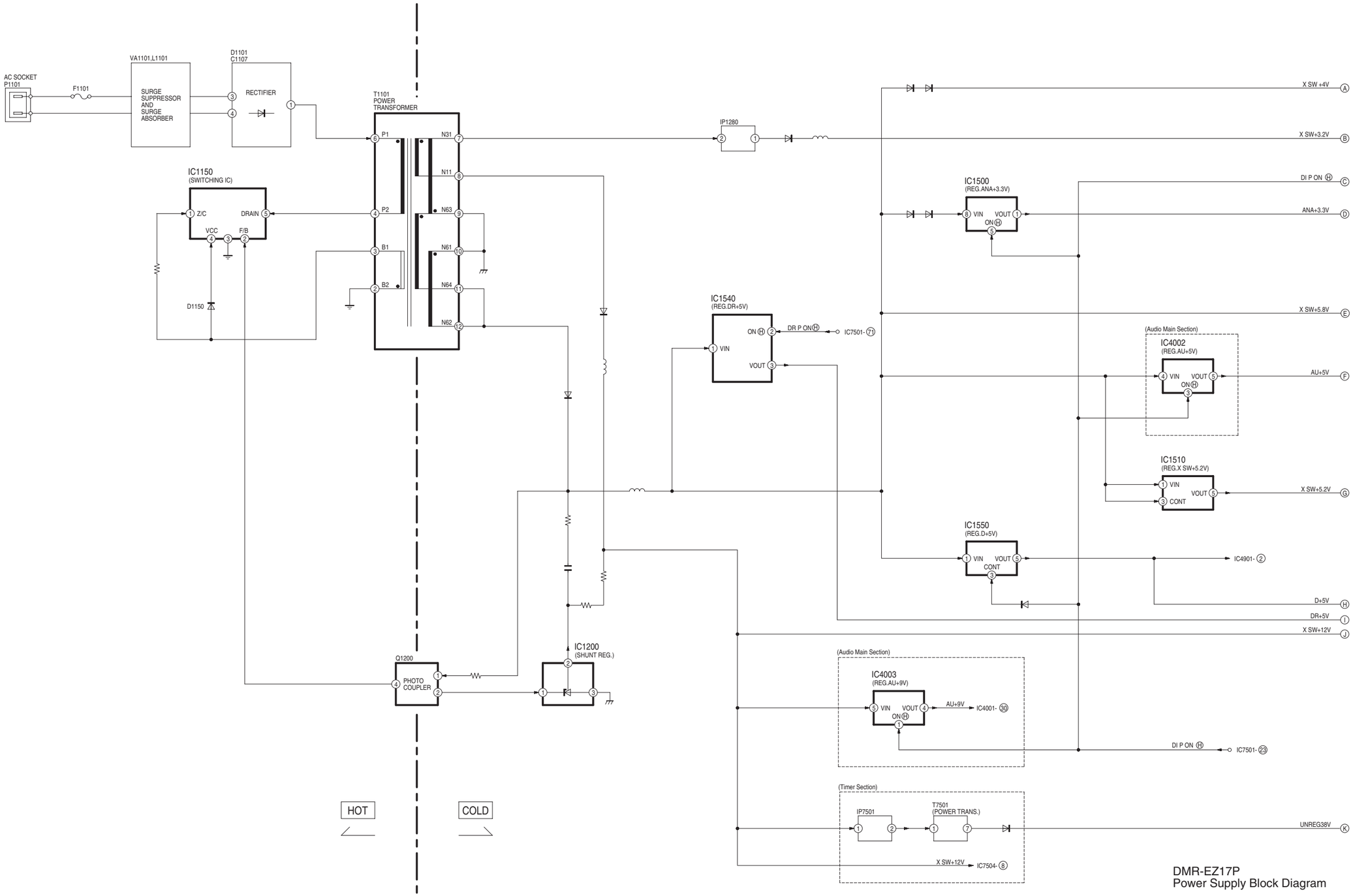
Versions of updating disc		Versions of FL display		Judgment of updating disc	Descriptions
Main firm	Drive firm	Main firm	Drive firm		
3090U5	S126	3090U5	S155	NG	If this updating disc was used, the product will be made down version. 1. Download latest firmware from TSN System, and burn it to CD-R or CD-RW. 2. Update product with this downloaded latest firmware.
3010C5	S155	3040C5	S155		
3090U5	S155	3090U5	S126	OK	If this updating disc was used, the product will be made up version.
3040C5	S155	3010C5	S155		

Use the following checklist to establish the judgement criteria for the picture and sound.

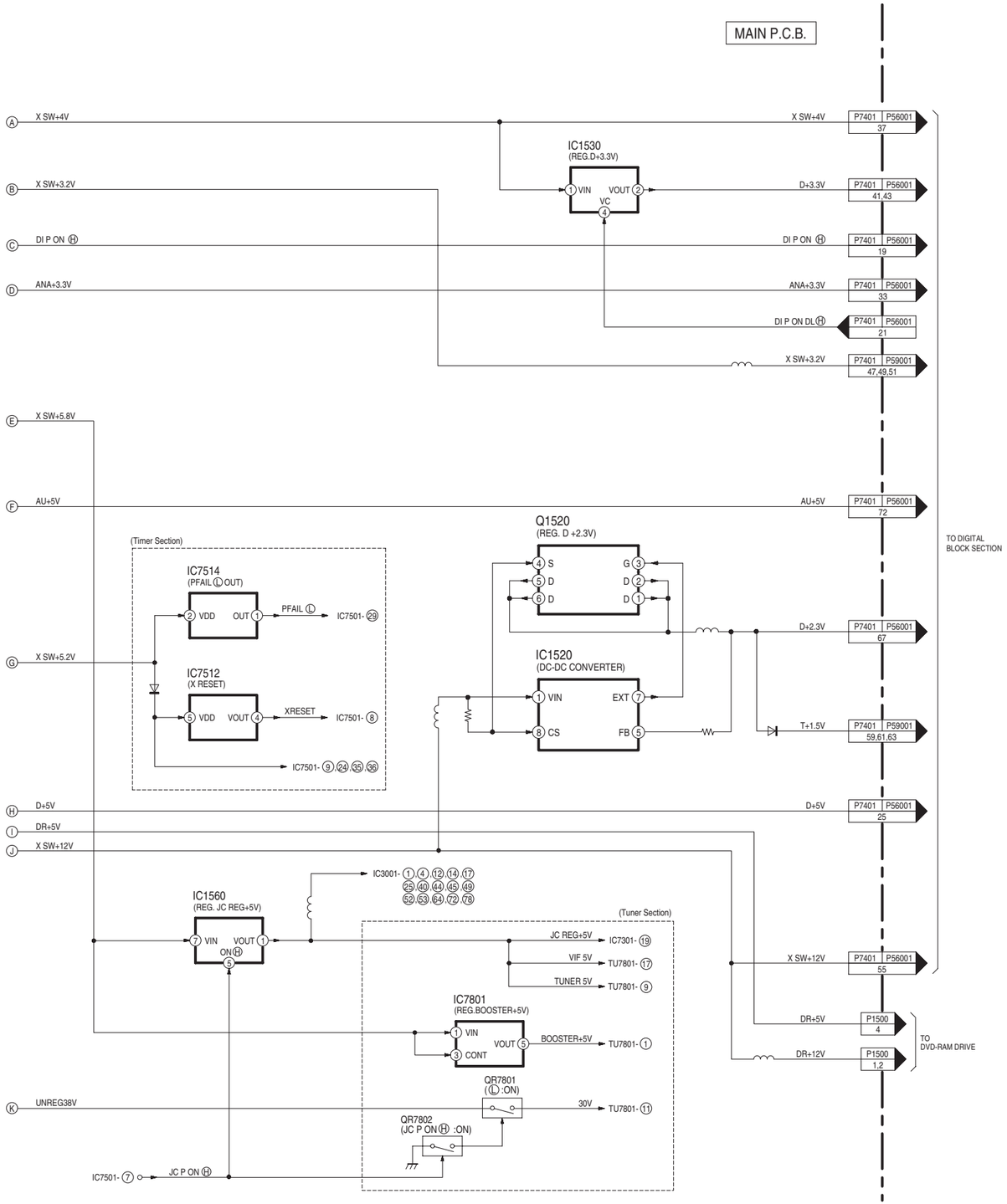
Item	Contents	Check	Item	Contents	Check
Picture	Block noise		Sound	Distorted sound	
	Crosscut noise			Noise (static, background noise, etc.)	
	Dot noise			The sound level is too low.	
	Picture disruption			The sound level is too high.	
	Not bright enough			The sound level changes.	
	Too bright				
	Flickering color				
	Color fading				

11 Block Diagram

11.1. Power Supply Block Diagram

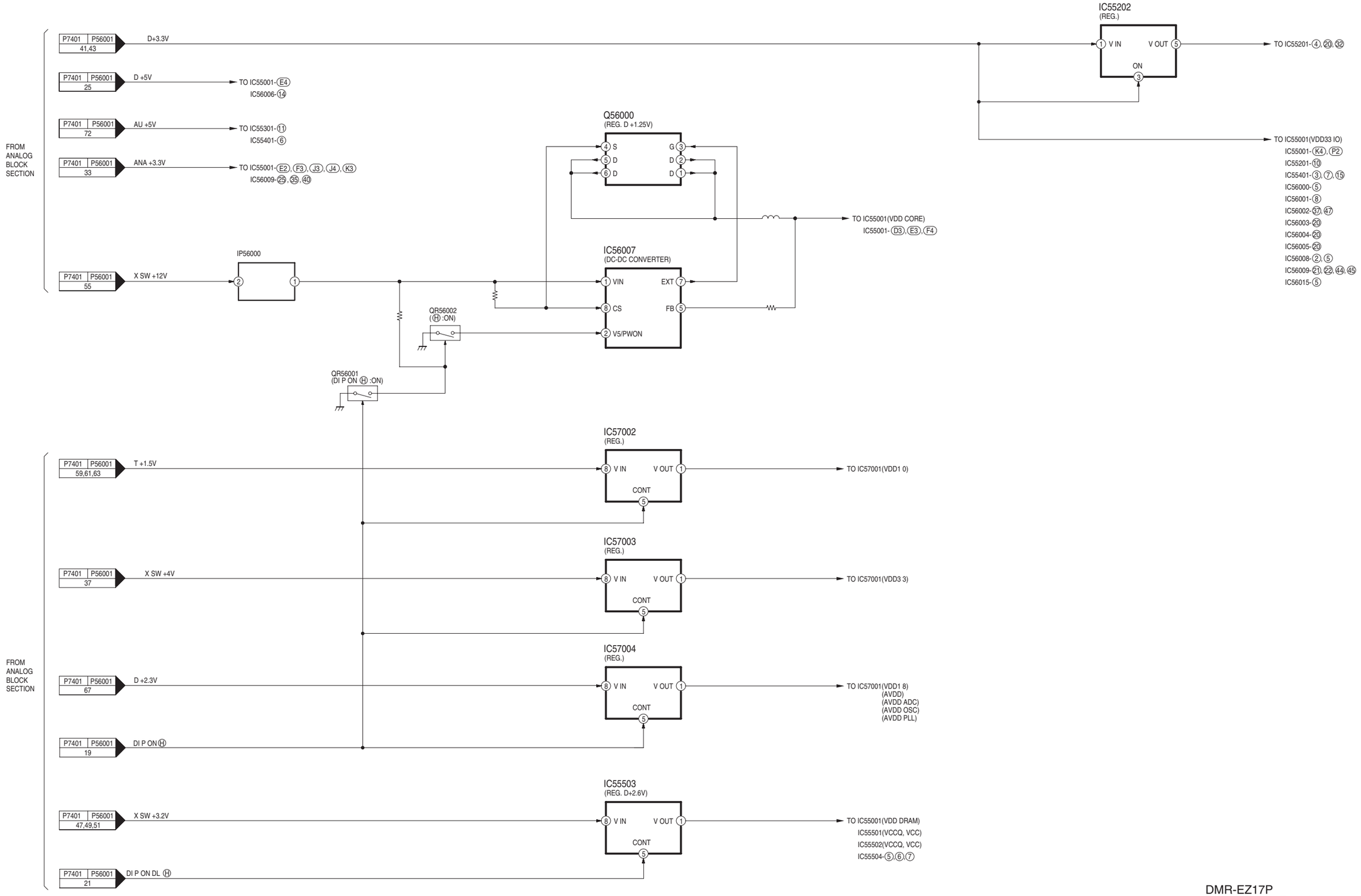


DMR-EZ17P
Power Supply Block Diagram



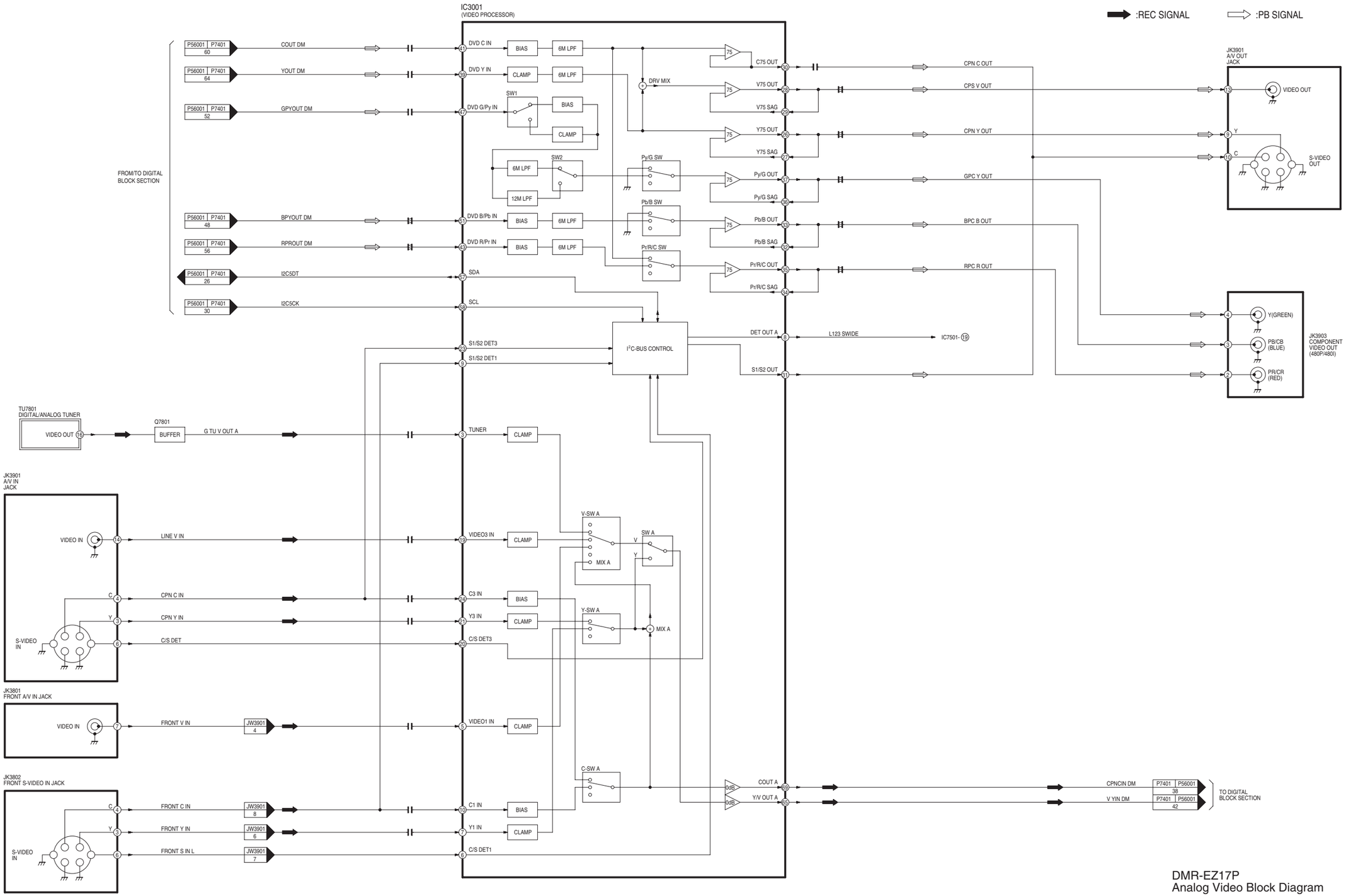
DMR-EZ17P
Power Supply Block Diagram

11.2. Digital P.C.B. Regulator Block Diagram



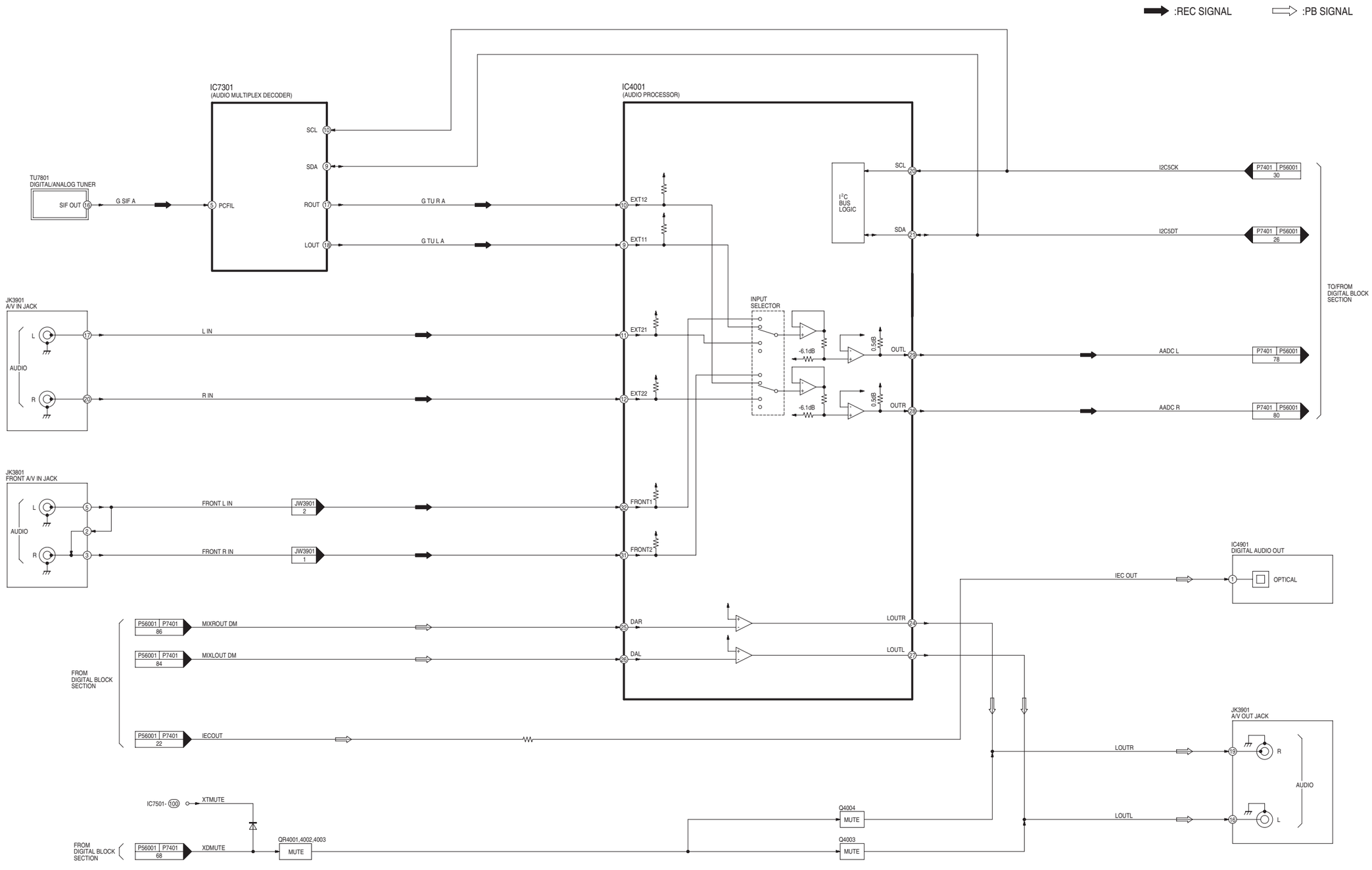
DMR-EZ17P
Digital P.C.B. Regulator
Block Diagram

11.3. Analog Video Block Diagram



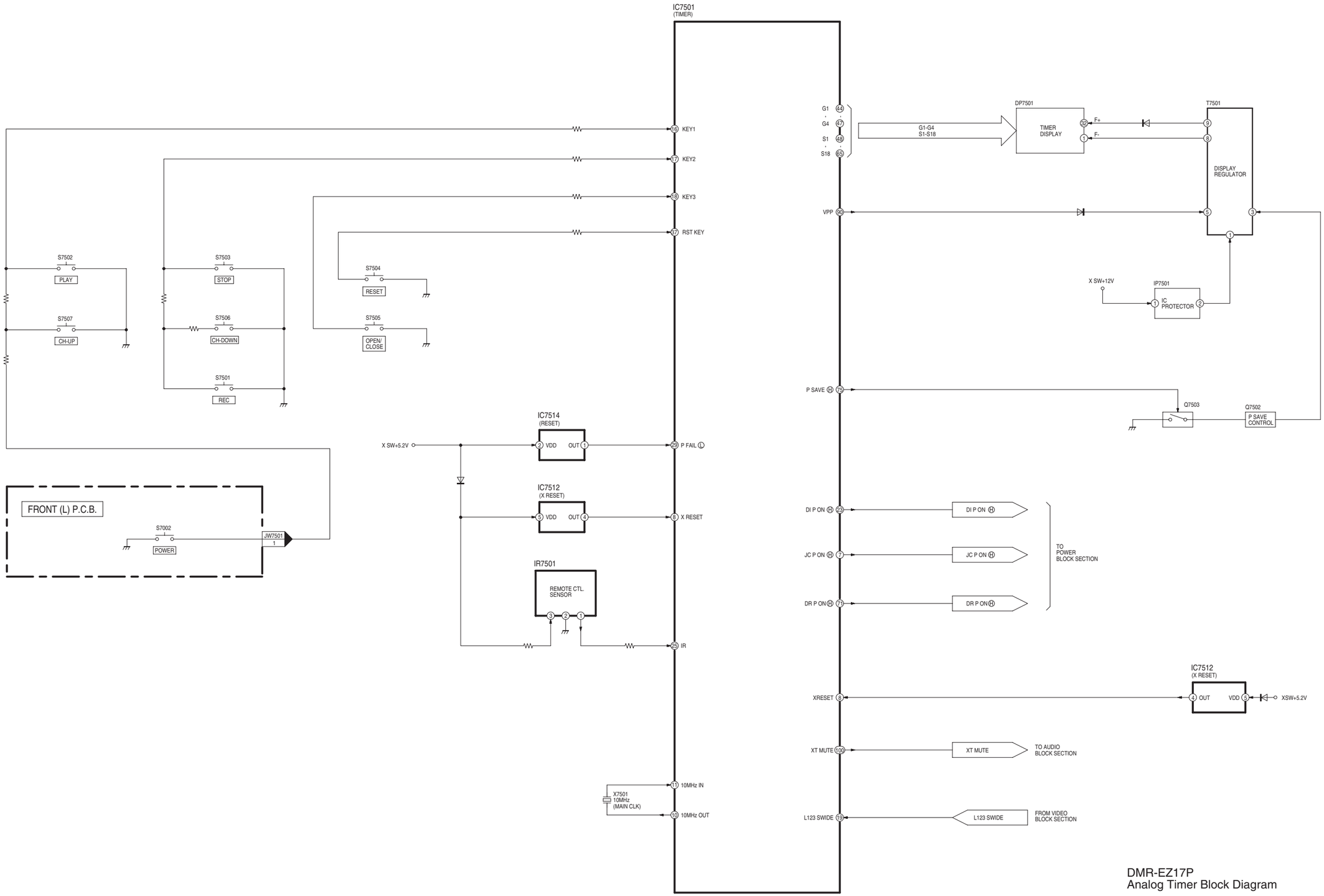
DMR-EZ17P
Analog Video Block Diagram

11.4. Analog Audio Block Diagram



DMR-EZ17P
Analog Audio Block Diagram

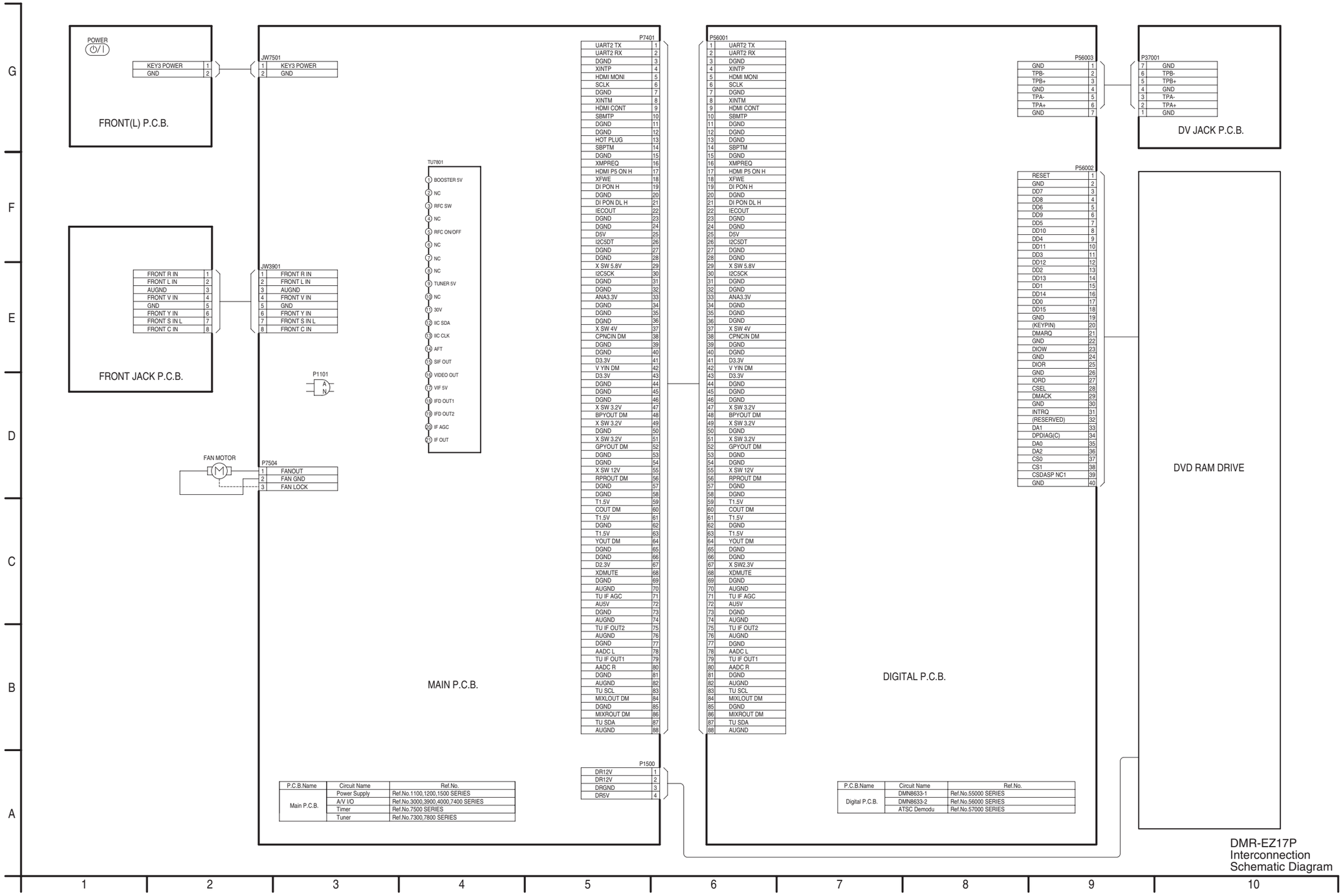
11.5. Analog Timer Block Diagram



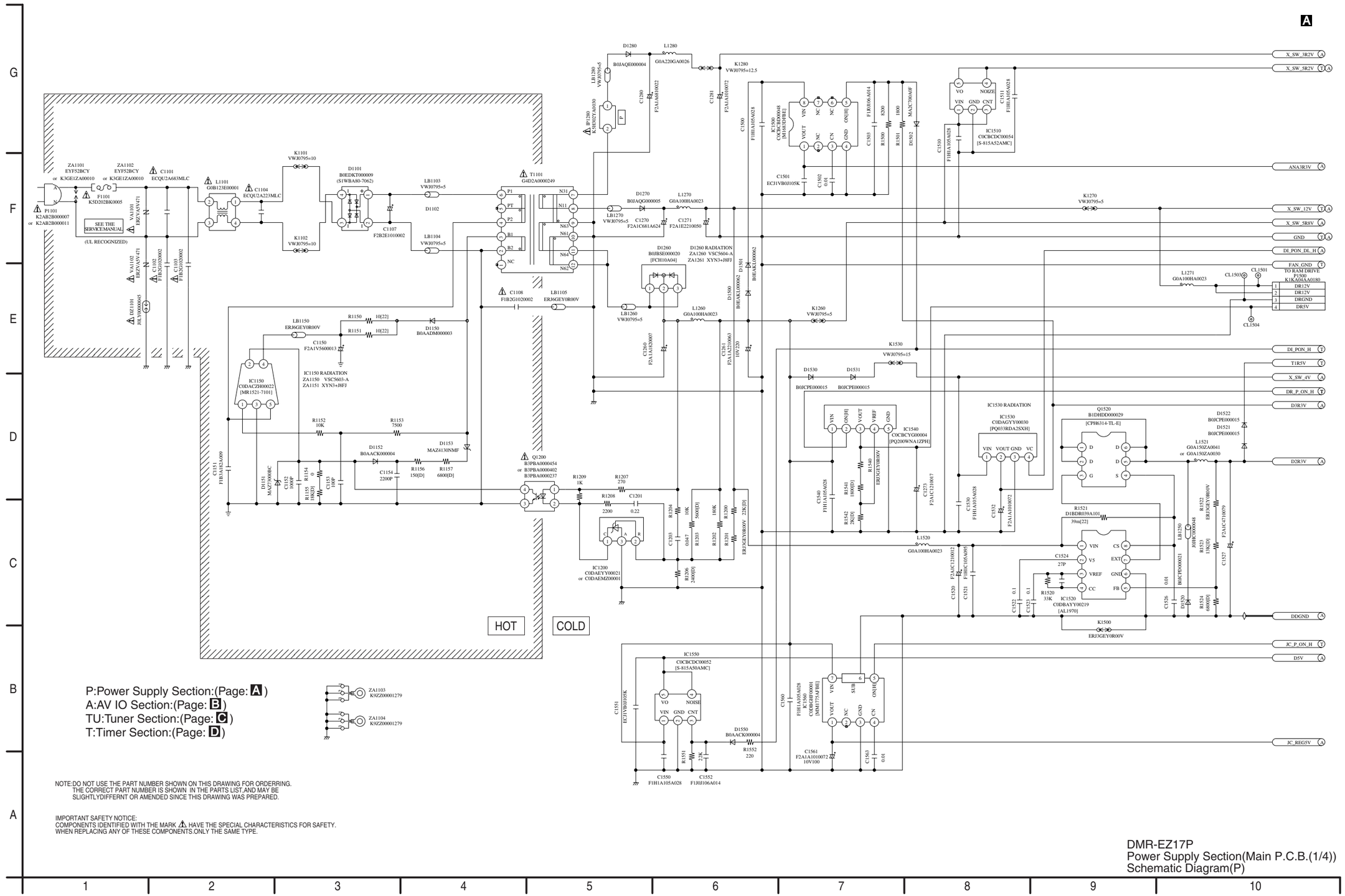
DMR-EZ17P
Analog Timer Block Diagram

12 Schematic Diagram

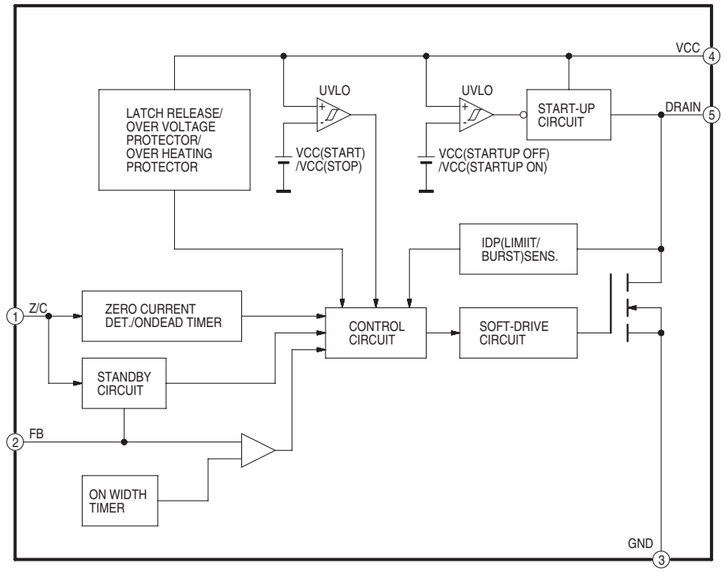
12.1. Interconnection Schematic Diagram



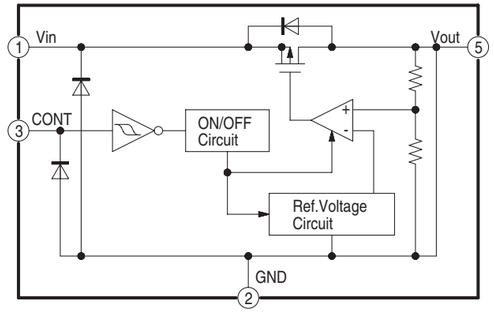
12.2. Power Supply Section (Main P.C.B. (1/4)) Schematic Diagram (A)



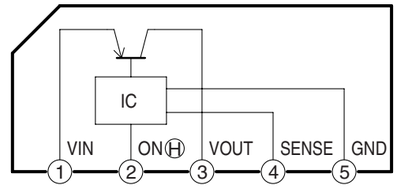
IC1150
SWITCHING IC
IC-DETAIL BLOCK DIAGRAM



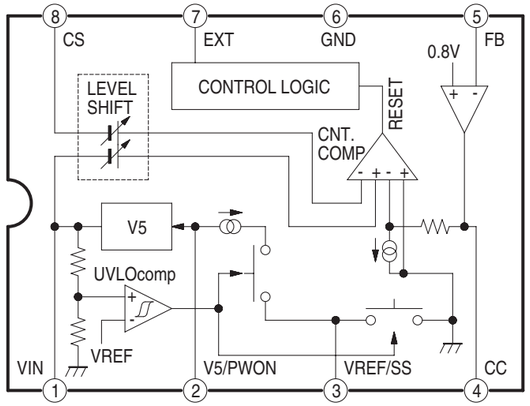
IC1510
XSW +5.2V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM



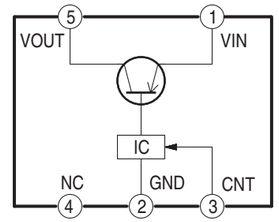
IC1540
DR +5V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM



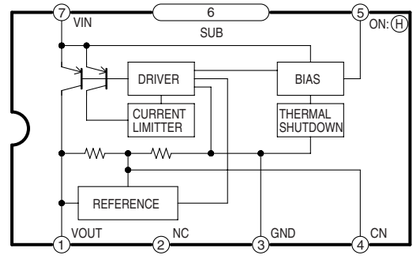
IC1520
DC-DC CONVERTER
IC-DETAIL BLOCK DIAGRAM



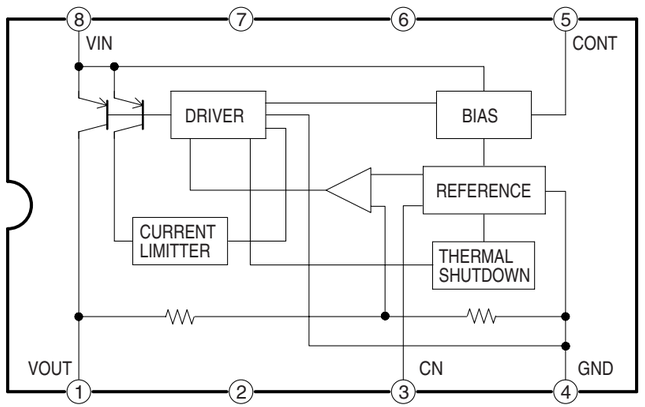
IC1550
D +5V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM



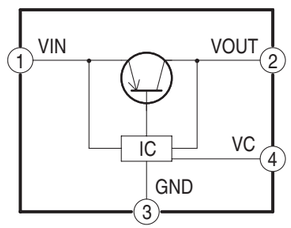
IC1560
JC +5V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM



IC1500
ANA +3.3V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM

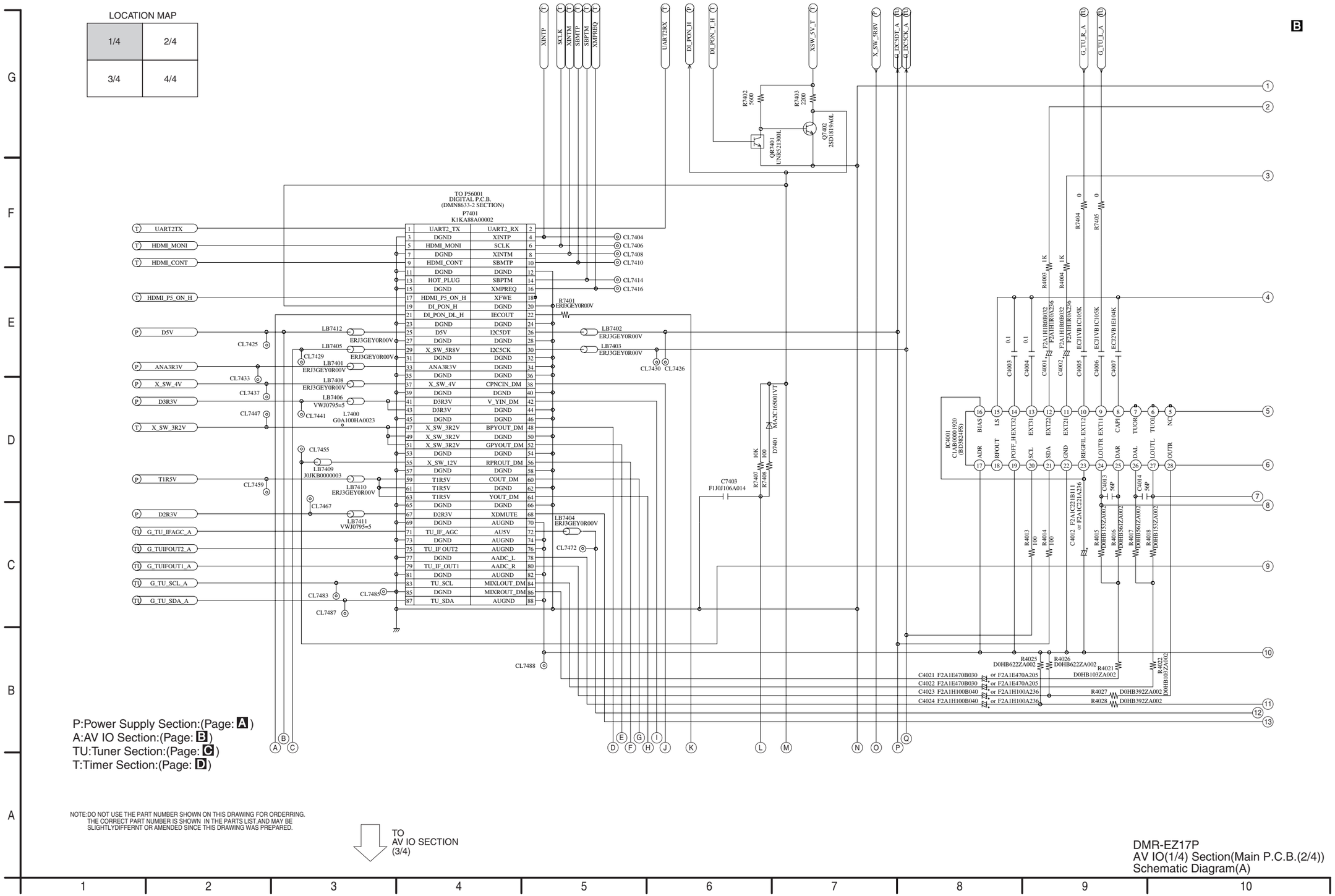


IC1530
D +5V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM

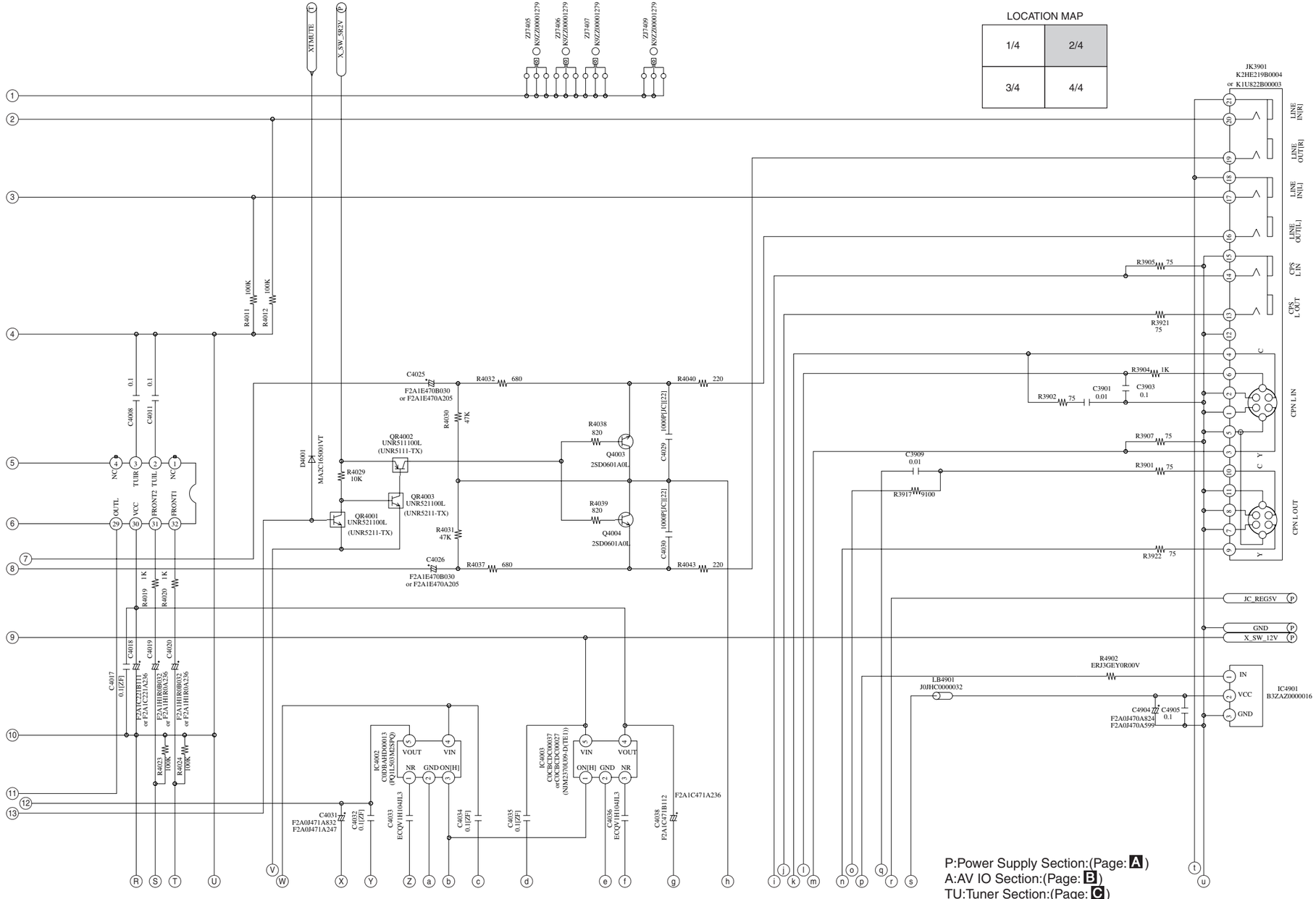


IC1150 Detail Block Diagram
IC1500 Detail Block Diagram
IC1510 Detail Block Diagram
IC1520 Detail Block Diagram
IC1530 Detail Block Diagram
IC1540 Detail Block Diagram
IC1550 Detail Block Diagram
DMR-EZ17P IC-Detail Block Diagram

12.3. AV IO (1/4) Section (Main P.C.B. (2/4)) Schematic Diagram (A)



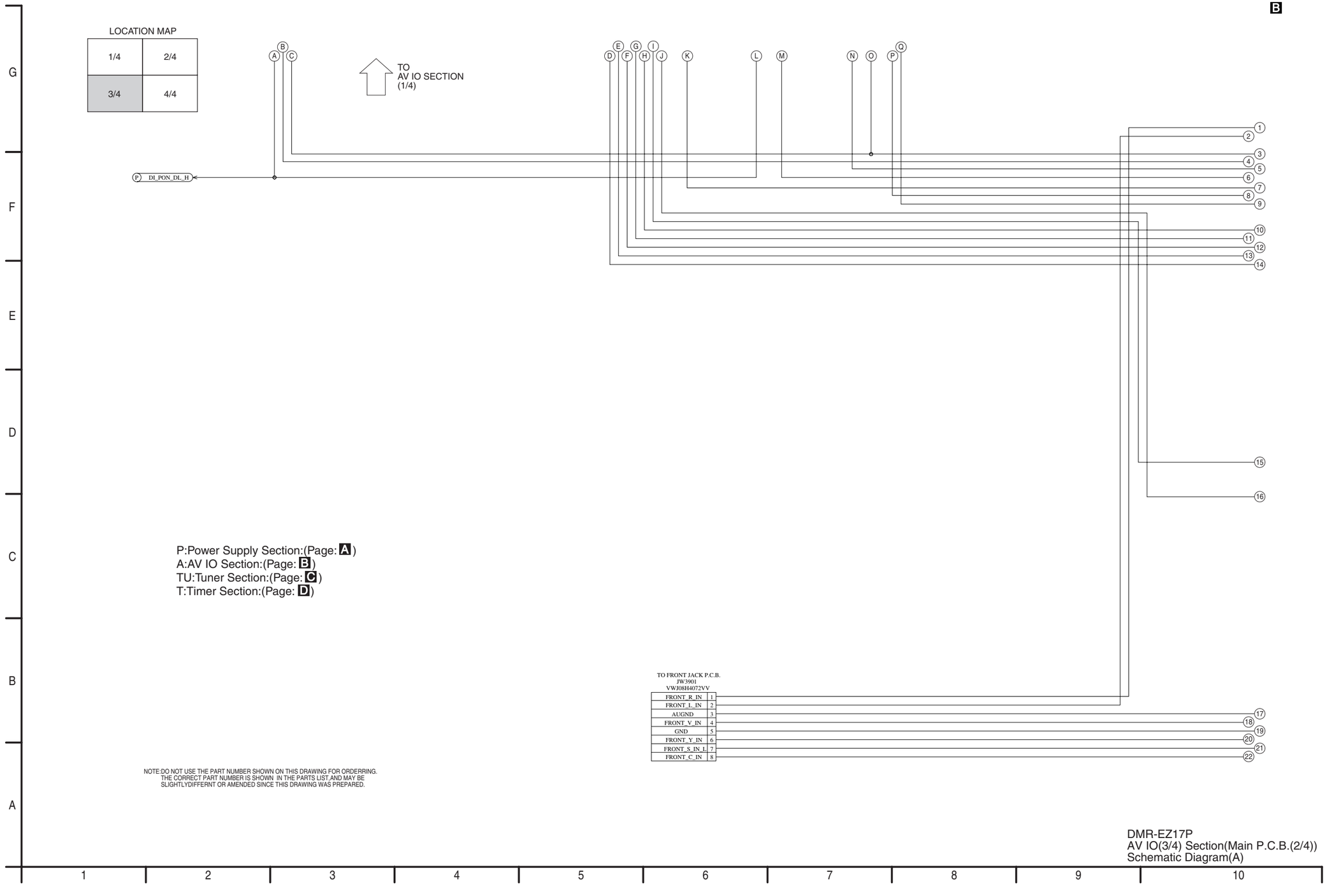
12.4. AV IO (2/4) Section (Main P.C.B. (2/4)) Schematic Diagram (A)



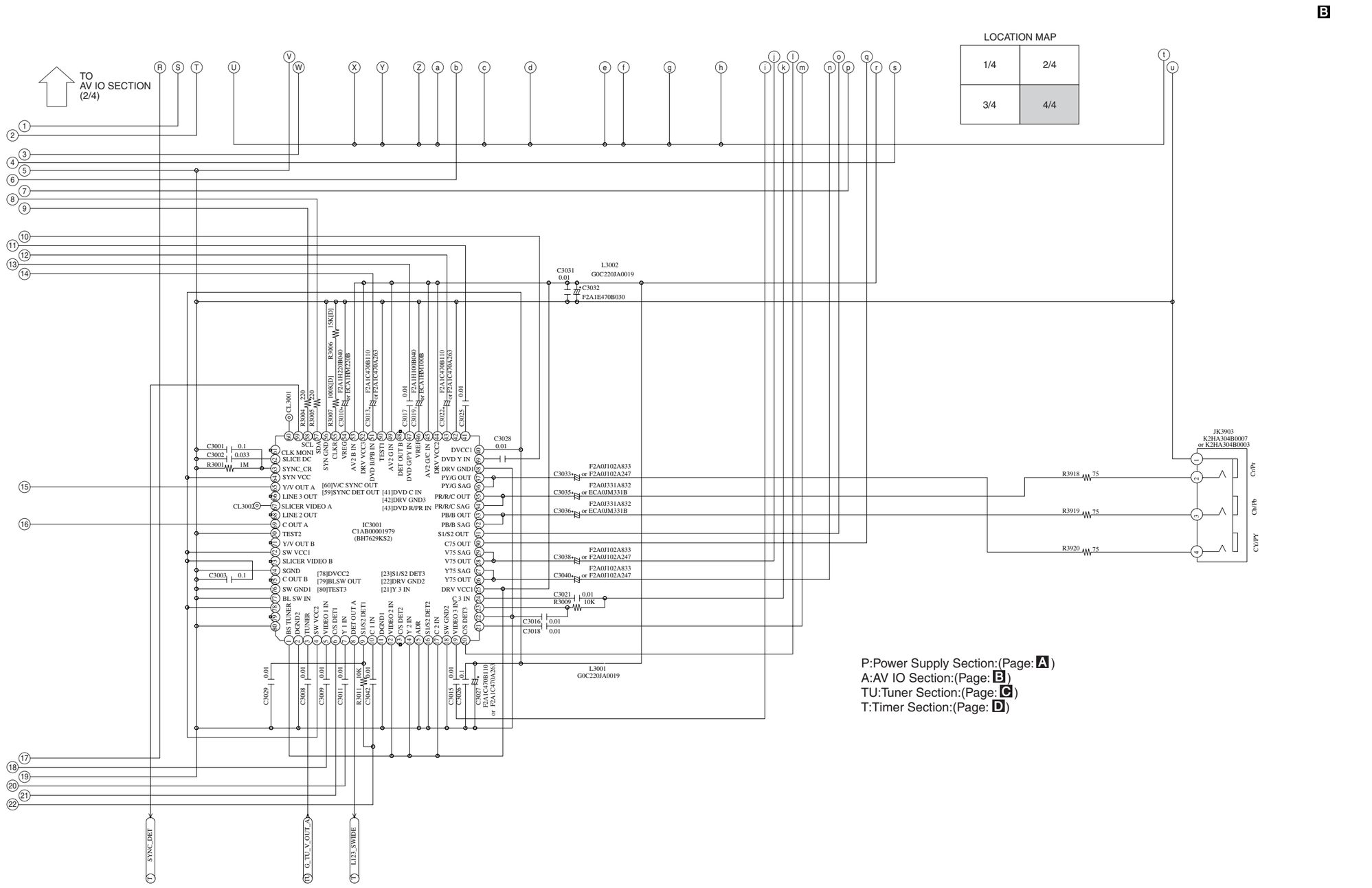
NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLYDIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

DMR-EZ17P
AV IO(2/4)Section(Main P.C.B.(2/4))
Schematic Diagram(A)

12.5. AV IO (3/4) Section (Main P.C.B. (2/4)) Schematic Diagram (A)



12.6. AV IO (4/4) Section (Main P.C.B. (2/4)) Schematic Diagram (A)

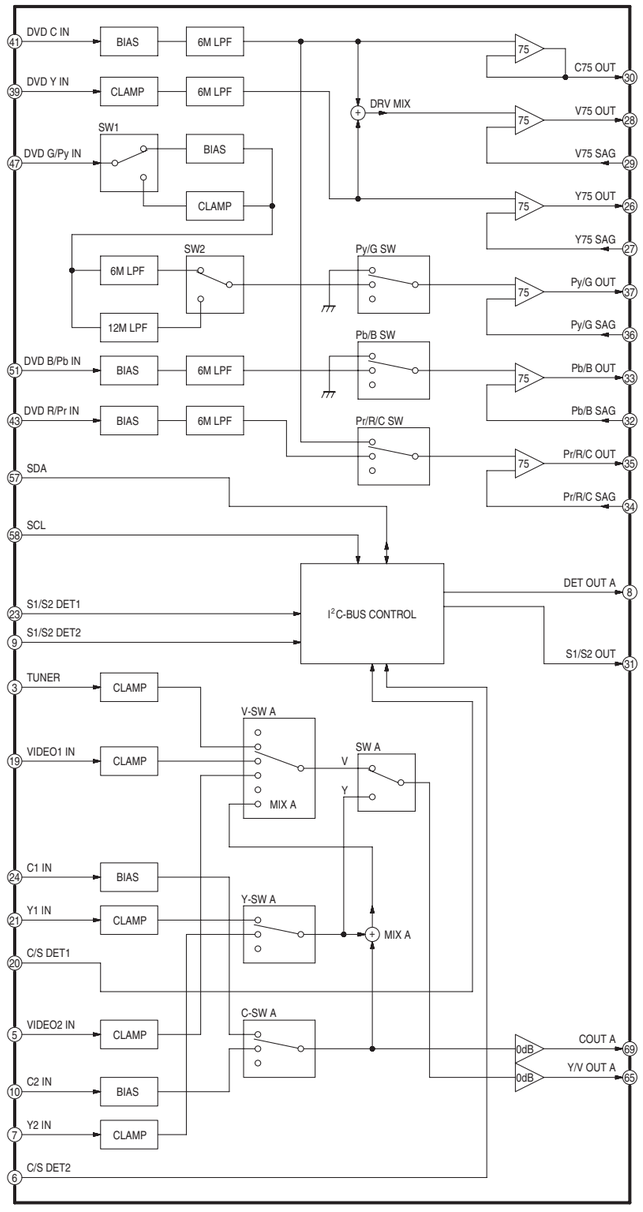


NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING.
THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE
SLIGHTLYDIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

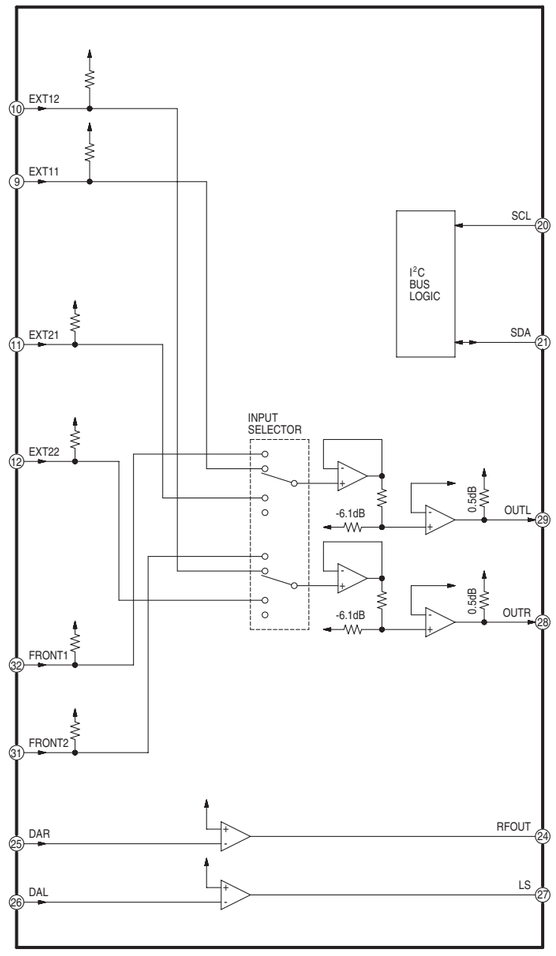
DMR-EZ17P
AV IO(4/4) Section(Main P.C.B.(2/4))
Schematic Diagram(A)

11 12 13 14 15 16 17 18 19 20

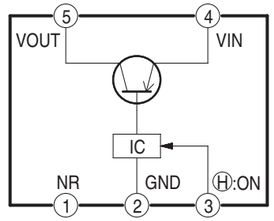
IC3001
VIDEO PROCESSOR
IC-DETAIL BLOCK DIAGRAM



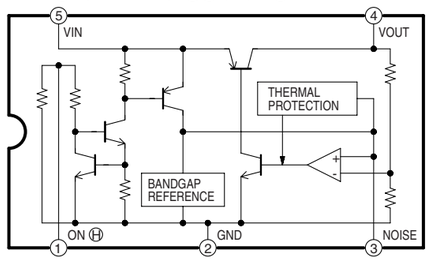
IC4001
AUDIO PROCESSOR
IC-DETAIL BLOCK DIAGRAM



IC4002
AU +5V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM



IC4003
AU +9V SWITCHING REGULATOR
IC-DETAIL BLOCK DIAGRAM

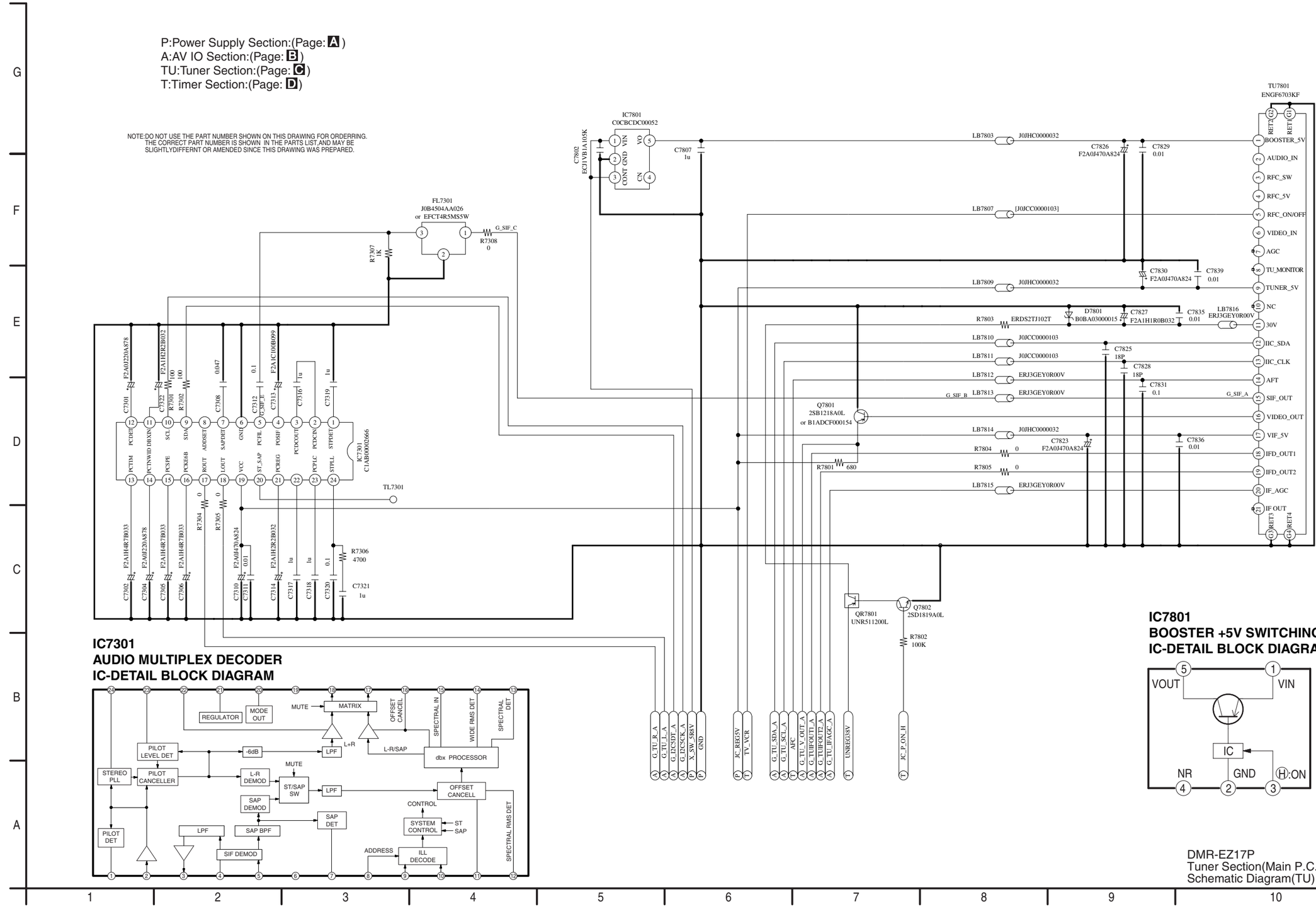


IC3001 Detail Block Diagram
IC4001 Detail Block Diagram
IC4002 Detail Block Diagram
IC4003 Detail Block Diagram
DMR-EZ17P IC-Detail Block Diagram

12.7. Tuner Section (Main P.C.B. (3/4)) Schematic Diagram (TU)

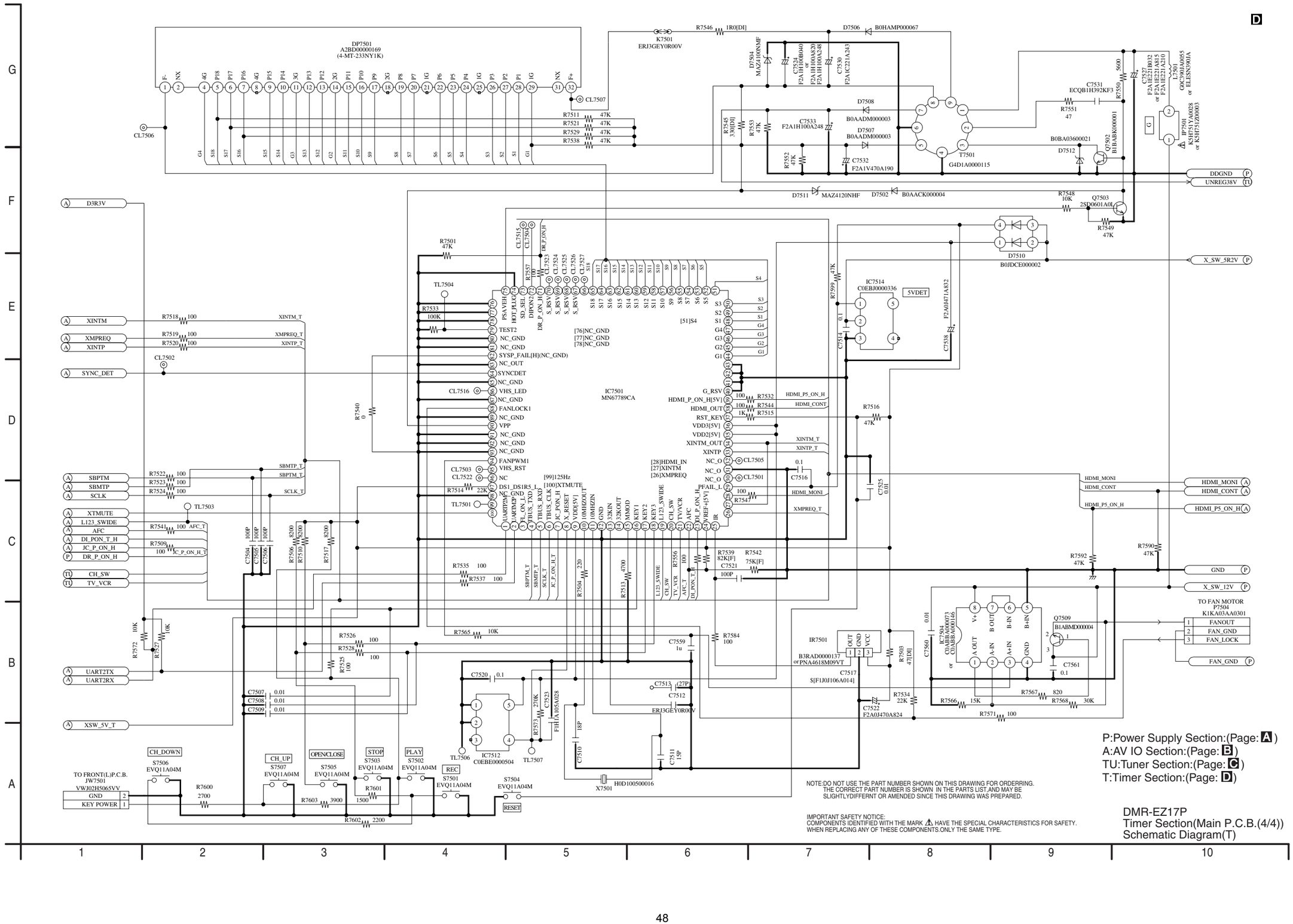
P:Power Supply Section:(Page: A)
A:AV IO Section:(Page: B)
TU:Tuner Section:(Page: C)
T:Timer Section:(Page: D)

NOTE:DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERRING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST,AND MAY BE SLIGHTLYDIFFERNT OR AMENDED SINCE THIS DRAWING WAS PREPARED.

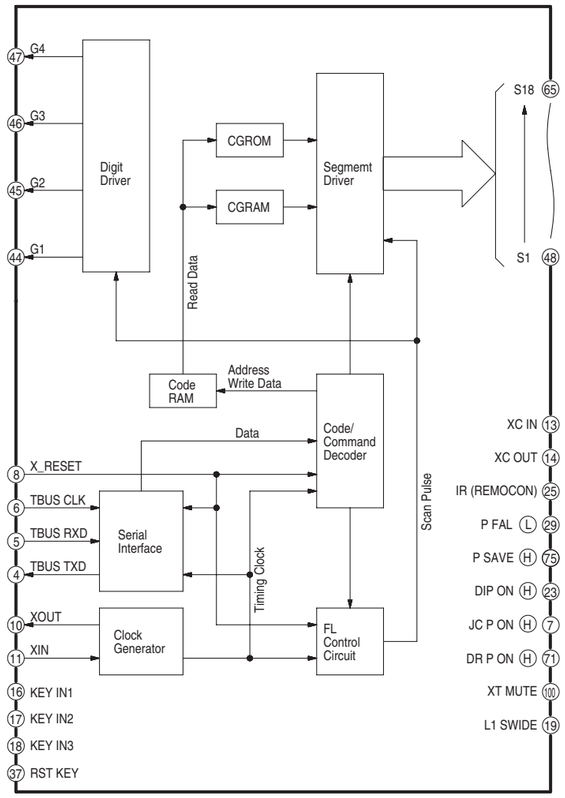


DMR-EZ17P
Tuner Section(Main P.C.B.(3/4))
Schematic Diagram(TU)

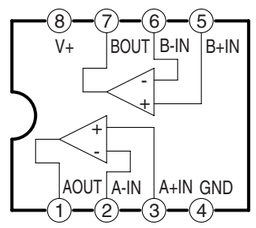
12.8. Timer Section (Main P.C.B. (4/4)) Schematic Diagram (T)



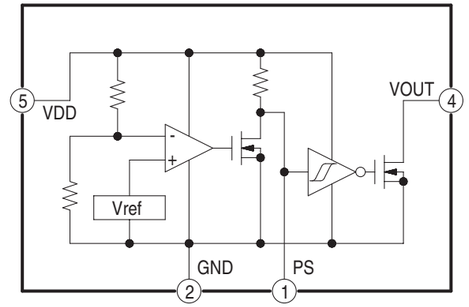
IC7501
TIMER
IC-DETAIL BLOCK DIAGRAM



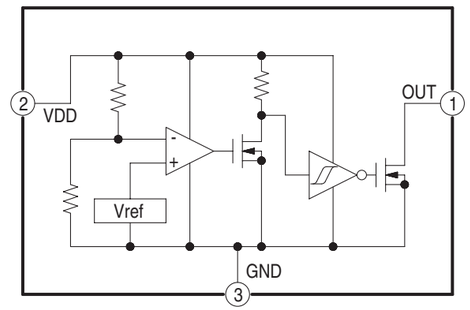
IC7504
FAN MOTOR DRIVE
IC-DETAIL BLOCK DIAGRAM



IC7512
X RESET
IC-DETAIL BLOCK DIAGRAM

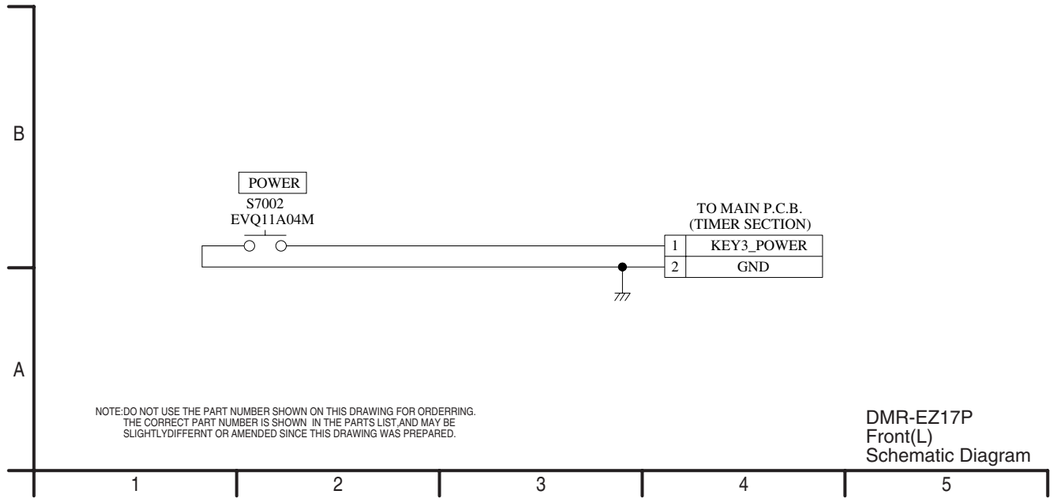


IC7514
RESET
IC-DETAIL BLOCK DIAGRAM

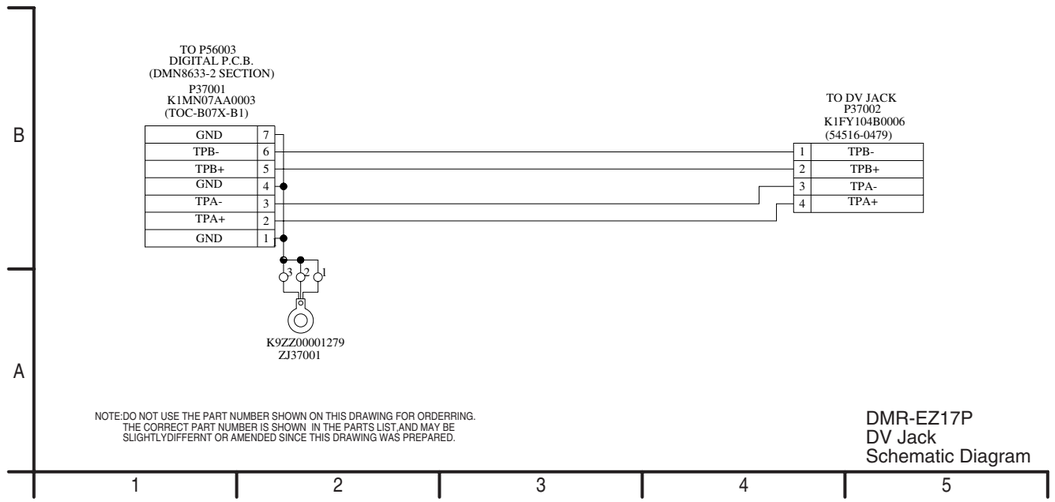


IC7501 Detail Block Diagram
IC7504 Detail Block Diagram
IC7512 Detail Block Diagram
IC7514 Detail Block Diagram
DMR-EZ17P IC-Detail Block Diagram

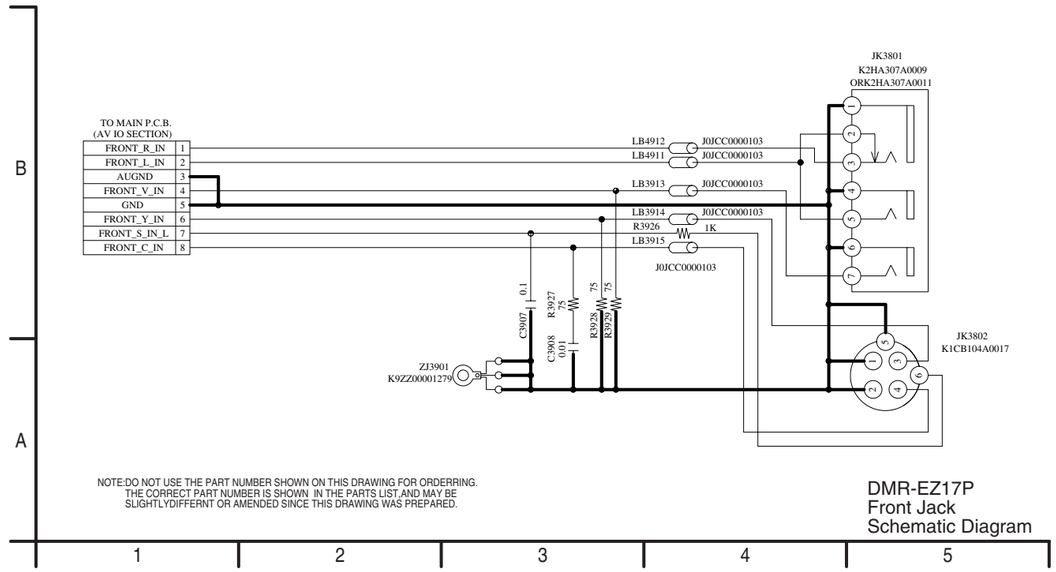
12.9. Front (L) Schematic Diagram



12.10. DV Jack Schematic Diagram



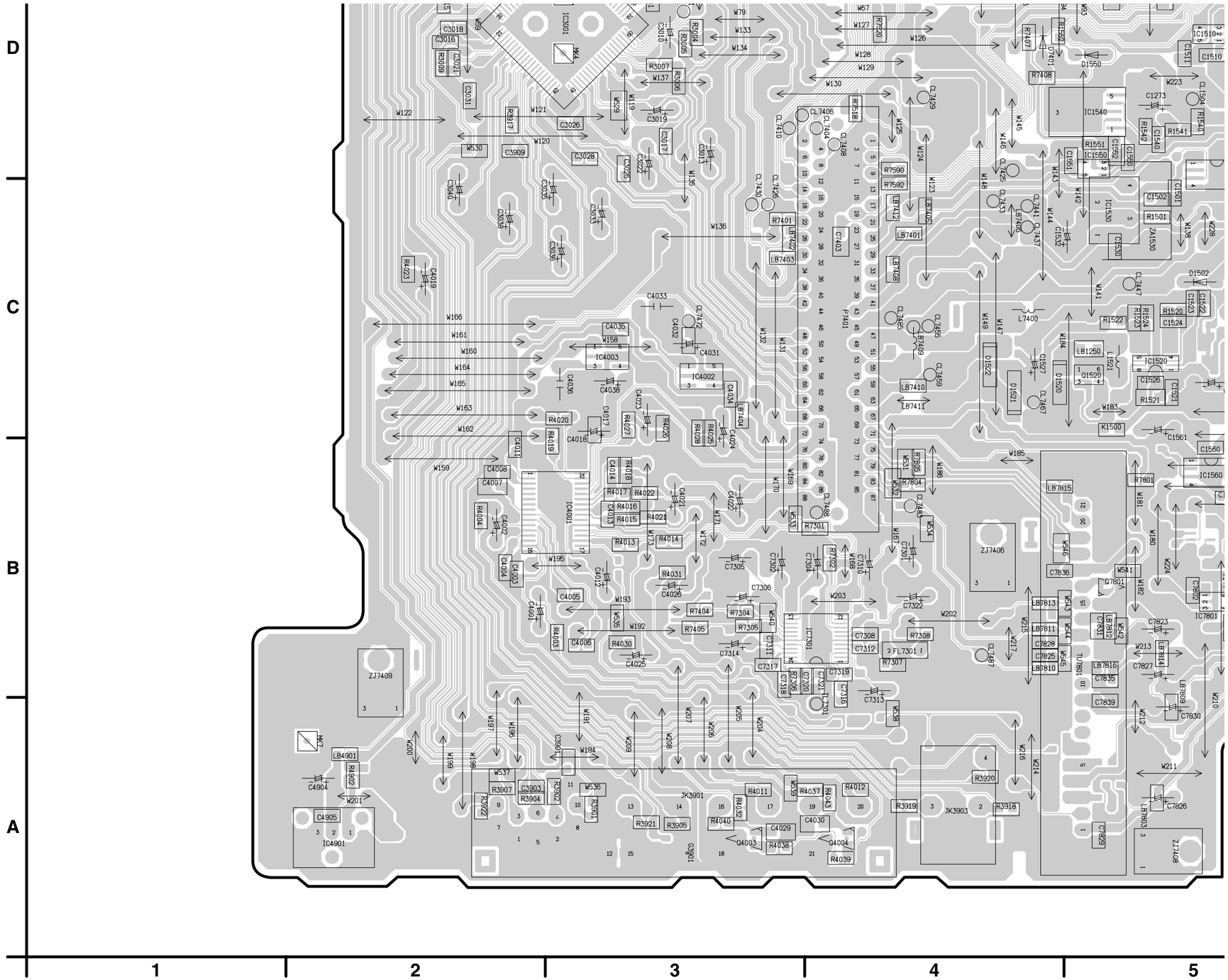
12.11. Front Jack Schematic Diagram



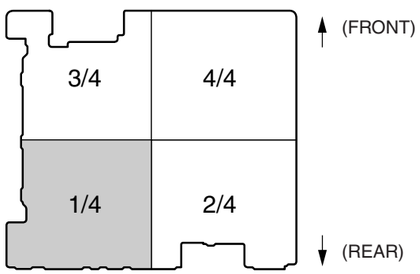
13 Printed Circuit Board

13.1. Main P.C.B.

13.1.1. Main P.C.B. (1/4 Section)

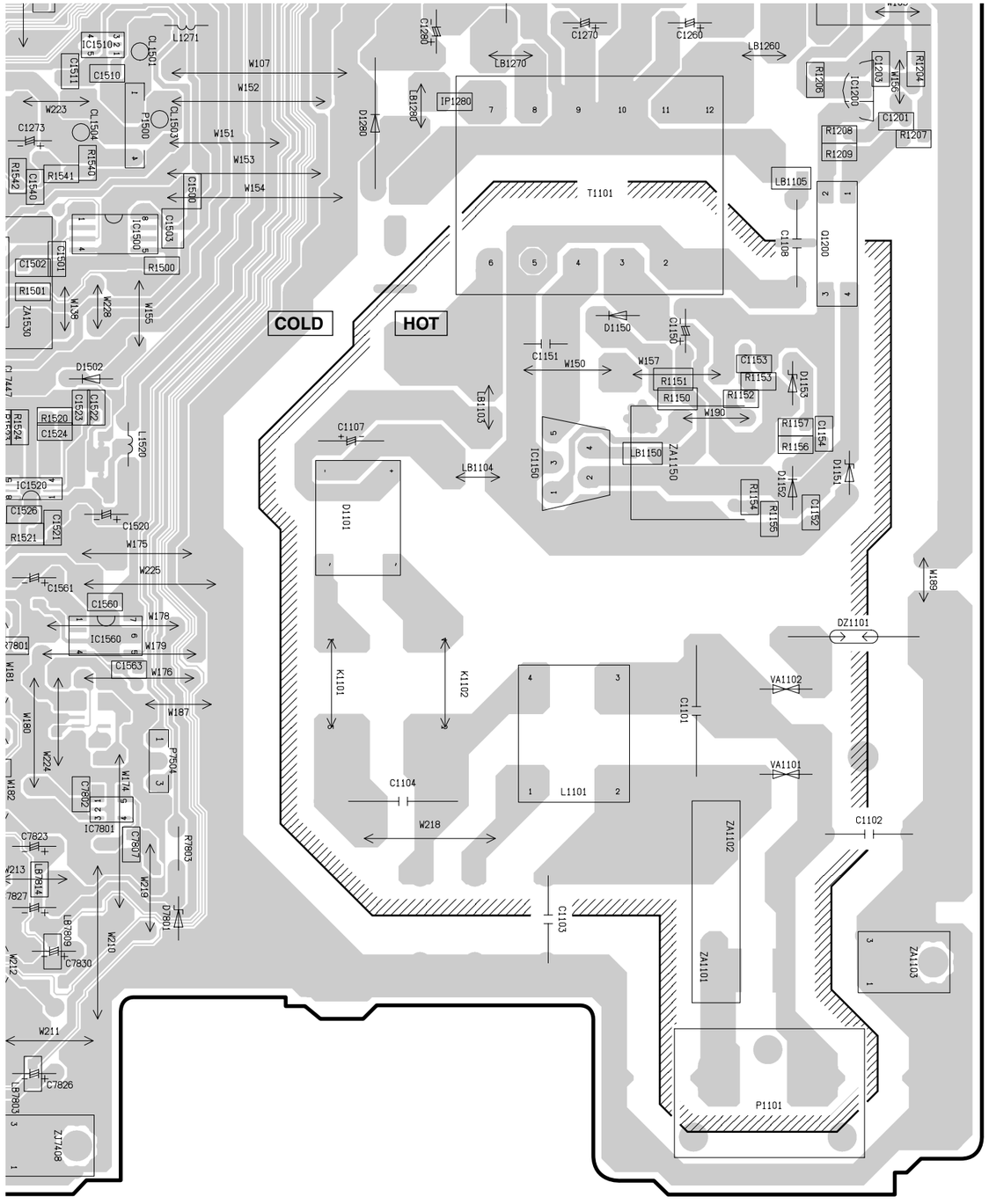


Location Map

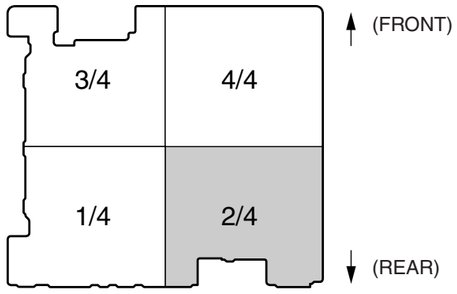


DMR-EZ17P
Main P.C.B. (VEP79141A)
(1/4 Section)

13.1.2. Main P.C.B. (2/4 Section)



Location Map

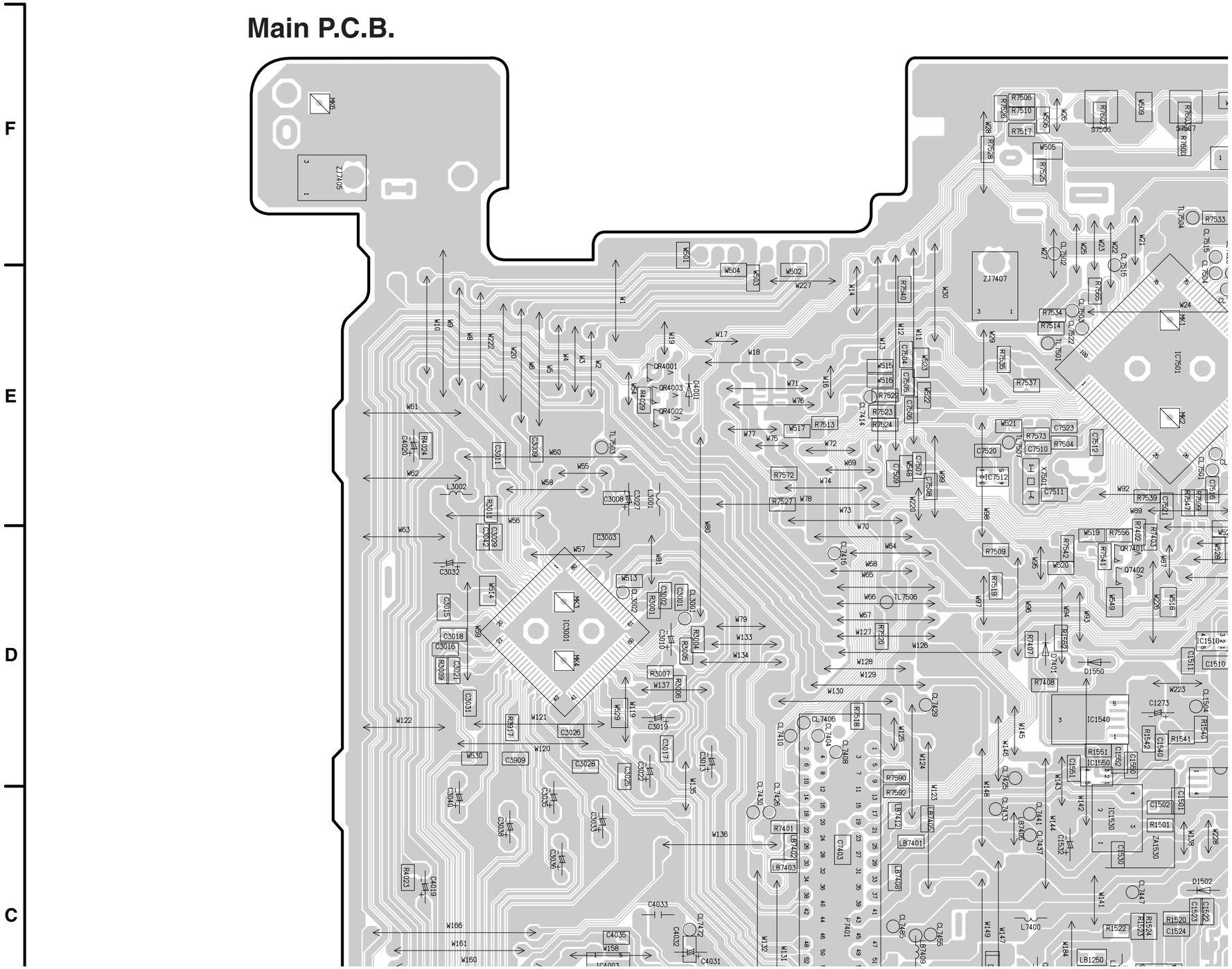


DMR-EZ17P
Main P.C.B. (VEP79141A)
(2/4 Section)

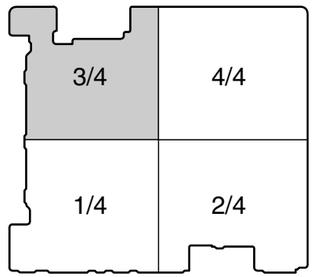
5 6 7 8 9

13.1.3. Main P.C.B. (3/4 Section)

Main P.C.B.

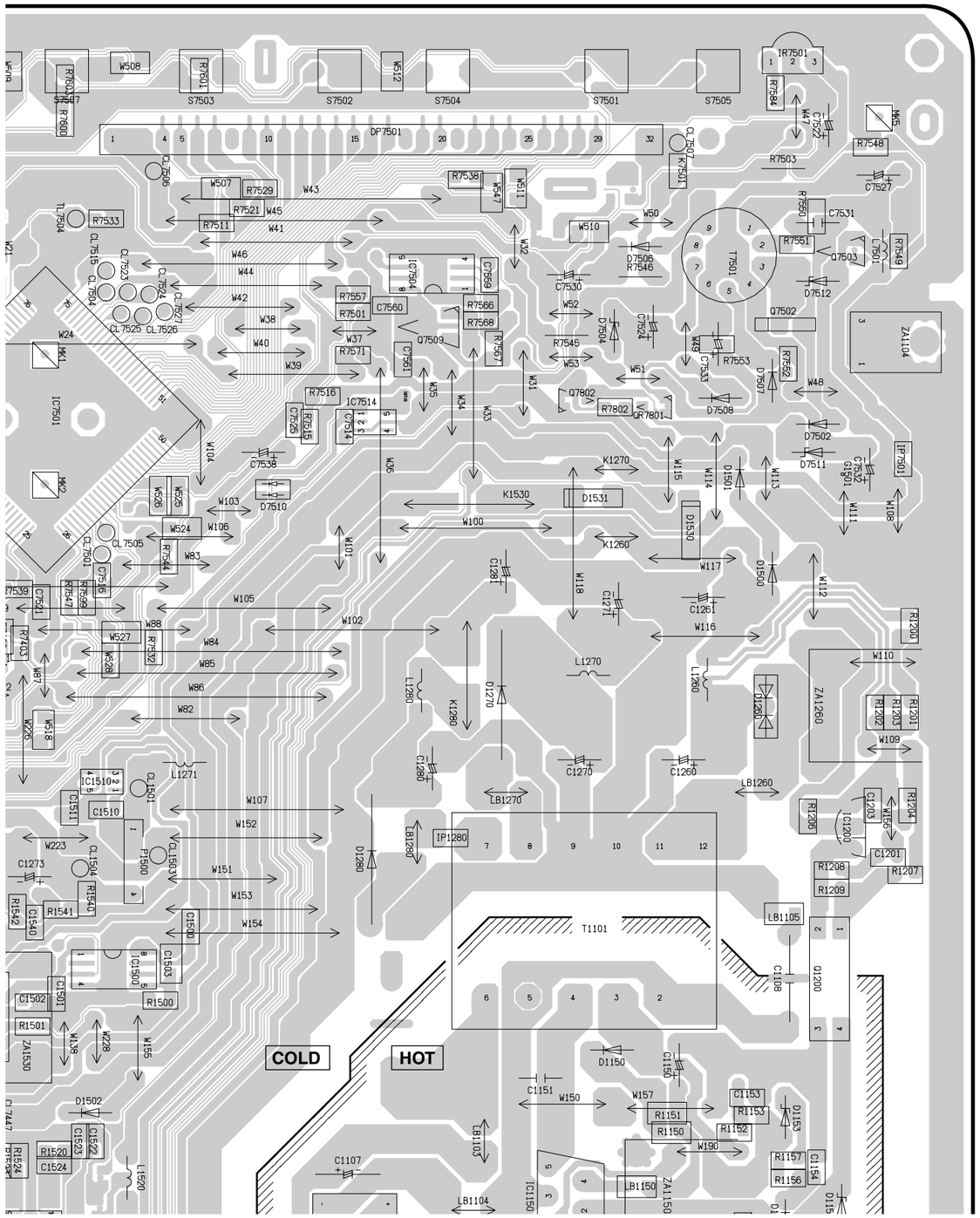


Location Map

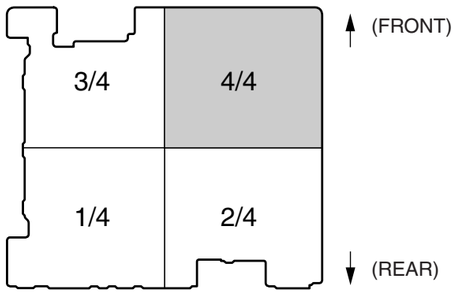


DMR-EZ17P
Main P.C.B. (VEP79141A)
(3/4 Section)

13.1.4. Main P.C.B. (4/4 Section)



Location Map



DMR-EZ17P
Main P.C.B. (VEP79141A)
(4/4 Section)

13.1.5. Main P.C.B. Address Information

Main P.C.B.

Integrated Circuit	
IC1150	C-6
IC1200	D-7
IC1500	D-5
IC1510	D-5
IC1520	C-5
IC1530	C-5
IC1540	D-5
IC1550	D-5
IC1560	B-5
IC3001	D-3
IC4001	B-3
IC4002	C-3
IC4003	C-3
IC4901	A-2
IC7301	B-4
IC7501	E-5
IC7504	F-6
IC7512	E-4
IC7514	E-6
IC7801	B-5
Transistor	
Q1200	D-7
Q1520	C-5
Q4003	A-3
Q4004	A-4
Q7402	D-5
Q7502	E-7
Q7503	F-7
Q7509	E-6
Q7801	B-5
Q7802	E-6
Transistor-resistor	
QR4001	E-3
QR4002	E-3
QR4003	E-3
QR7401	D-5
QR7801	E-7
Test Point	
CL1501	D-5
CL1503	D-5
CL1504	D-5
CL3001	D-3
CL3002	D-3
CL7404	D-4
CL7406	D-4
CL7408	D-4
CL7410	D-3
CL7414	E-4
CL7416	D-4
CL7425	D-4
CL7426	C-3
CL7429	D-4
CL7430	C-3
CL7433	C-4
CL7437	C-4
CL7441	C-4
CL7447	C-5
CL7455	C-4
CL7459	C-4
CL7467	C-4
CL7472	C-3
CL7483	B-4
CL7485	C-4
CL7487	B-4
CL7488	B-4
CL7501	E-5
CL7502	F-4
CL7503	E-5
CL7504	E-5
CL7505	E-5
CL7506	F-5
CL7507	F-7
CL7515	F-5
CL7516	F-5
CL7522	E-5
CL7523	E-5
CL7524	E-5
CL7525	E-5
CL7526	E-5
CL7527	E-5
TL7301	A-4
TL7501	E-4
TL7503	E-3
TL7504	F-5
TL7506	D-4
TL7507	E-4
Connector	
JK3901	A-3
JK3903	A-4
P1101	A-7
P1500	D-5
P7401	C-4
P7504	B-5
Diode	
D1101	C-6
D1150	C-7
D1151	C-7
D1152	C-7
D1153	C-7
D1260	D-7
D1270	D-6
D1280	D-6
D1500	E-7
D1501	E-7
D1502	C-5
D1520	C-4
D1521	C-4
D1522	C-4
D1530	E-7
D1531	E-6
D1550	D-5
D4001	E-3
D7401	D-4
D7502	E-7
D7504	E-7
D7506	F-7
D7507	E-7
D7508	E-7
D7510	E-6
D7511	E-7
D7512	F-7
D7801	B-5
Crystal Osillator	
X7501	E-4
IC Protector	
IP1280	D-6
IP7501	E-7
IR7501	F-7
Filter	
FL7301	B-4
Coil	
L1101	B-6
L1260	D-7
L1270	D-6
L1271	D-5
L1280	D-6
L1520	C-5
L1521	C-5
L3001	E-3
L3002	E-2
L7400	C-4
L7501	F-7
LB1103	C-6
LB1104	C-6
LB1105	D-7
LB1150	C-7
LB1250	C-5
LB1260	D-7
LB1270	D-6
LB1280	D-6
LB4901	A-2
LB7401	C-4
LB7402	C-3
LB7403	C-3
LB7404	C-3
LB7405	C-4
LB7406	C-4
LB7408	C-4
LB7409	C-4
LB7410	C-4
LB7411	C-4
LB7412	C-4
LB7803	A-5
LB7809	A-5
LB7810	B-4
LB7811	B-4
LB7812	B-5
LB7813	B-4
LB7814	B-5
LB7815	B-4
LB7816	B-5
Capasitor	
C1101	B-7
C1102	B-7
C1103	B-6
C1104	B-6
C1107	C-6
C1108	C-7
C1150	C-7
C1151	C-6
C1152	C-7
C1153	C-7
C1154	C-7
C1201	D-7
C1203	D-7
C1260	D-7
C1261	E-7
C1270	D-6
C1271	E-7
C1273	D-5
C1280	D-6
C1281	E-6
C1500	D-5
C1501	C-5
C1502	C-5
C1503	D-5
C1510	D-5
C1511	D-5
C1520	C-5
C1521	C-5
C1522	C-5
C1523	C-5
C1524	C-5
C1526	C-5
C1527	C-4
C1530	C-5
C1532	C-4
C1540	D-5
C1550	D-5
C1551	D-5
C1552	D-5
C1560	B-5
C1561	C-5
C1563	B-5
C3001	D-3
C3002	D-3
C3003	D-3
C3008	E-3
C3009	E-2
C3010	D-3
C3011	E-2
C3013	D-3
C3015	D-2
C3016	D-2
C3017	D-3
C3018	D-2
C3019	D-3
C3021	D-2
C3022	D-3
C3025	D-3
C3026	D-3
C3027	E-3
C3028	D-3
C3029	D-2
C3031	D-2
C3032	D-2
C3033	C-3
C3035	C-3
C3036	C-3
C3038	C-2
C3040	C-2
C3042	D-2
C3901	A-3
C3903	A-2
C3909	D-2
C4001	B-2
C4002	B-2
C4003	B-2
C4004	B-2
C4005	B-3
C4006	B-3
C4007	B-2
C4008	B-2
C4011	B-2
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C4013	B-3
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C4024	C-3
C4025	B-3
C4026	B-3
C4029	A-3
C4030	A-4
C4031	C-3
C4032	C-3
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C4034	C-3
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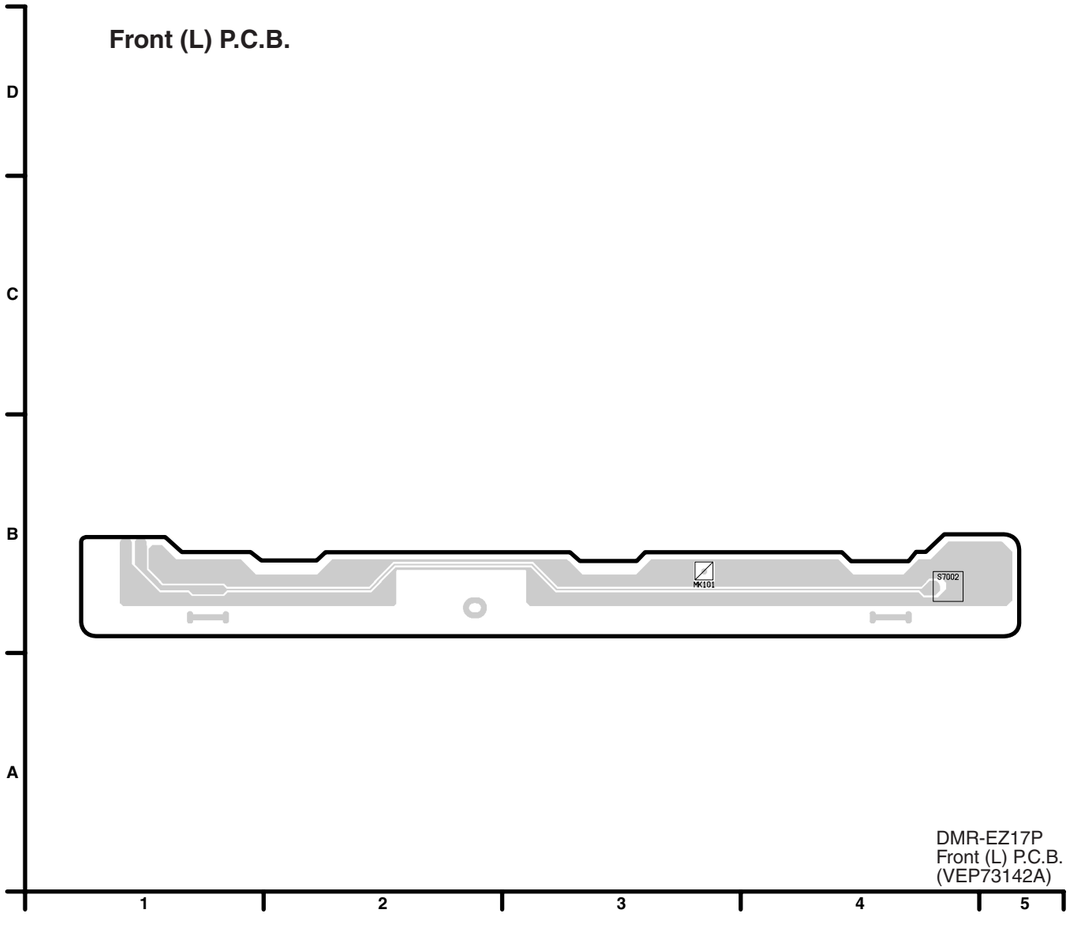
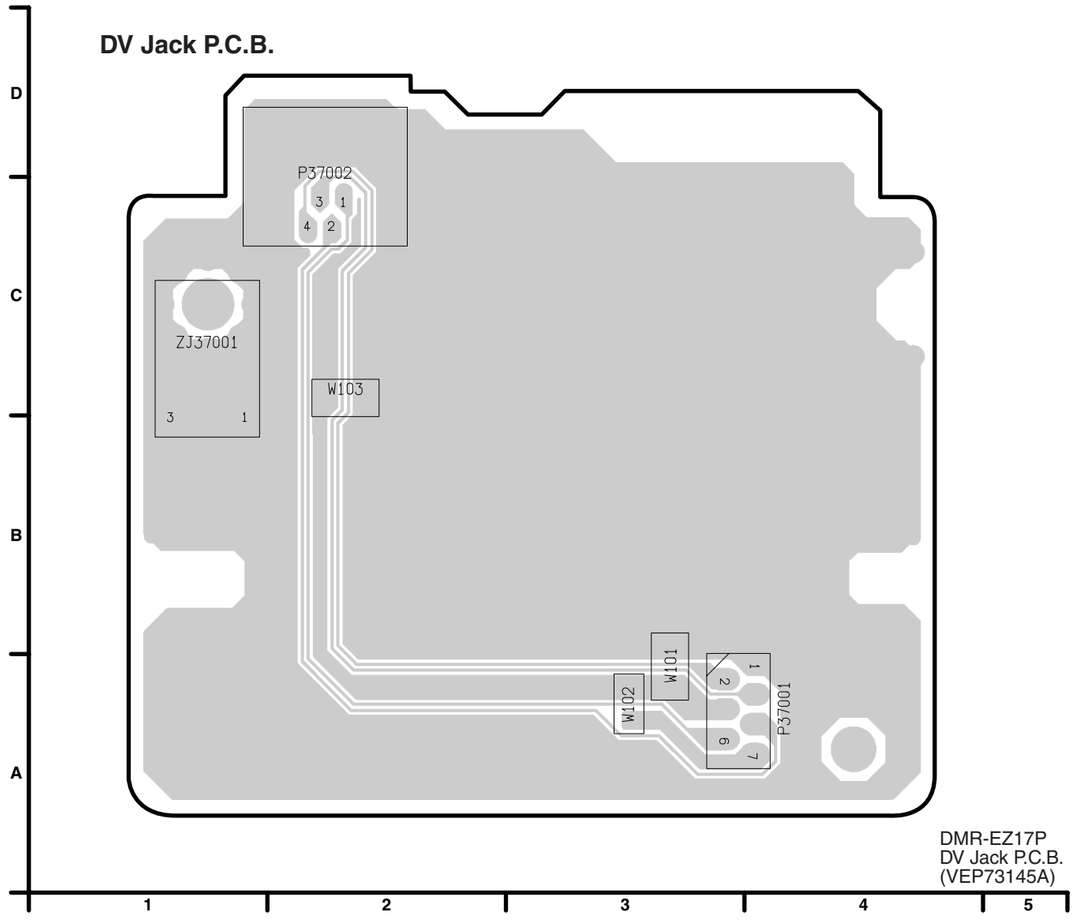
C4036	C-3
C4038	C-3
C4904	A-2
C4905	A-2
C7301	B-4
C7302	B-3
C7304	B-4
C7305	B-3
C7306	B-3
C7308	B-4
C7310	B-4
C7311	B-3
C7312	B-4
C7313	B-4
C7314	B-3
C7316	B-4
C7317	B-3
C7318	B-3
C7319	B-4
C7320	B-4
C7321	B-4
C7322	B-4
C7403	C-4
C7504	E-4
C7505	E-4
C7506	E-4
C7507	E-4
C7508	E-4
C7509	E-4
C7510	E-4
C7511	E-4
C7512	E-5
C7514	E-6
C7516	E-5
C7520	E-4
C7521	E-5
C7522	F-7
C7523	E-4
C7524	E-7
C7525	E-6
C7527	F-7
C7530	F-6
C7531	F-7
C7532	E-7
C7533	E-7
C7538	E-6
C7559	F-6
C7560	E-6
C7561	E-6
C7802	B-5
C7807	B-5
C7823	B-5
C7825	B-4
C7826	A-5
C7827	B-5
C7828	B-4
C7829	A-5
C7830	A-5
C7831	B-5
C7835	B-5
C7836	B-4
C7839	A-5
Resistor	
R1150	C-7
R1151	C-7
R1152	C-7
R1153	C-7
R1154	C-7
R1155	C-7
R1156	C-7
R1157	C-7
R1200	E-7
R1201	D-7
R1202	D-7
R1203	D-7
R1204	D-7
R1206	D-7
R1207	D-7
R1208	D-7
R1209	D-7
R1500	C-5
R1501	C-5
R1520	C-5
R1521	C-5
R1522	C-5
R1523	C-5
R1524	C-5
R1540	D-5
R1541	D-5
R1542	D-5
R1551	D-5
R1552	D-4
R3001	D-3
R3004	D-3
R3005	D-3
R3006	D-3
R3007	D-3
R3009	D-2
R3011	E-2
R3901	A-3
R3902	A-3
R3904	A-2
R3905	A-3
R3907	A-2
R3917	D-2
R3918	A-4
R3919	A-4
R3920	A-4
R3921	A-3
R3922	A-2
R4003	B-3
R4004	B-2
R4011	A-3
R4012	A-4
R4013	B-3
R4014	B-3
R4015	B-3
R4016	B-3
R4017	B-3
R4018	B-3
R4019	C-3
R4020	C-3
R4021	B-3
R4022	B-3
R4023	C-2
R4024	E-2
R4025	C-3
R4026	C-3
R4027	C-3
R4028	C-3
R4029	E-3
R4030	B-3
R4031	B-3
R4032	A-3
R4037	A-4
R4038	A-3
R4039	A-4
R4040	A-3
R4043	A-4
R4902	A-2
R7301	B-4
R7302	B-4
R7304	B-3
R7305	B-3
R7306	B-3
R7307	B-4
R7308	B-4
R7401	C-3
R7402	D-5
R7403	D-5
R7404	B-3
R7405	B-3
R7407	D-4
R7408	D-4
R7501	E-6
R7503	F-7
R7504	E-4
R7506	F-4
R7509	D-4
R7510	F-4
R7511	F-5
R7513	E-4
R7514	E-4
R7515	E-6
R7516	E-6
R7517	F-4
R7518	D-4
R7519	D-4
R7520	D-4
R7521	F-5
R7522	E-4
R7523	E-4
R7524	E-4
R7525	F-4
R7526	F-4
R7527	E-3
R7528	F-4
R7529	F-6
R7532	D-5
R7533	F-5
R7534	E-4
R7535	E-4
R7537	E-4
R7538	F-6
R7539	E-5
R7540	E-4
R7541	D-5
R7542	D-5
R7544	E-5
R7545	E-6
R7546	F-7
R7547	E-5
R7548	F-7
R7549	F-7
R7550	F-7
R7551	F-7
R7552	E-7
R7553	E-7
R7556	D-5
R7557	E-6
R7565	E-5
R7566	E-6
R7567	E-6
R7568	E-6
R7571	E-6
R7572	E-3
R7573	E-4
R7584	F-7
R7590	D-4
R7592	C-4
R7599	E-5
R7600	F-5
R7601	F-5
R7602	F-5
R7603	F-5
R7801	B-5
R7802	E-7
R7803	B-5
R7804	B-4
R7805	B-4
Switch	
S7501	F-7
S7502	F-6
S7503	F-5
S7504	F-6
S7505	F-7
S7506	F-5
S7507	F-5
Transformer	
T1101	D-6
T7501	F-7
Tuner	
TU7801	B-5
Varistor	
VA1101	B-7
VA1102	B-7
Display	
DP7501	F-6

13.2. Front (L) P.C.B.

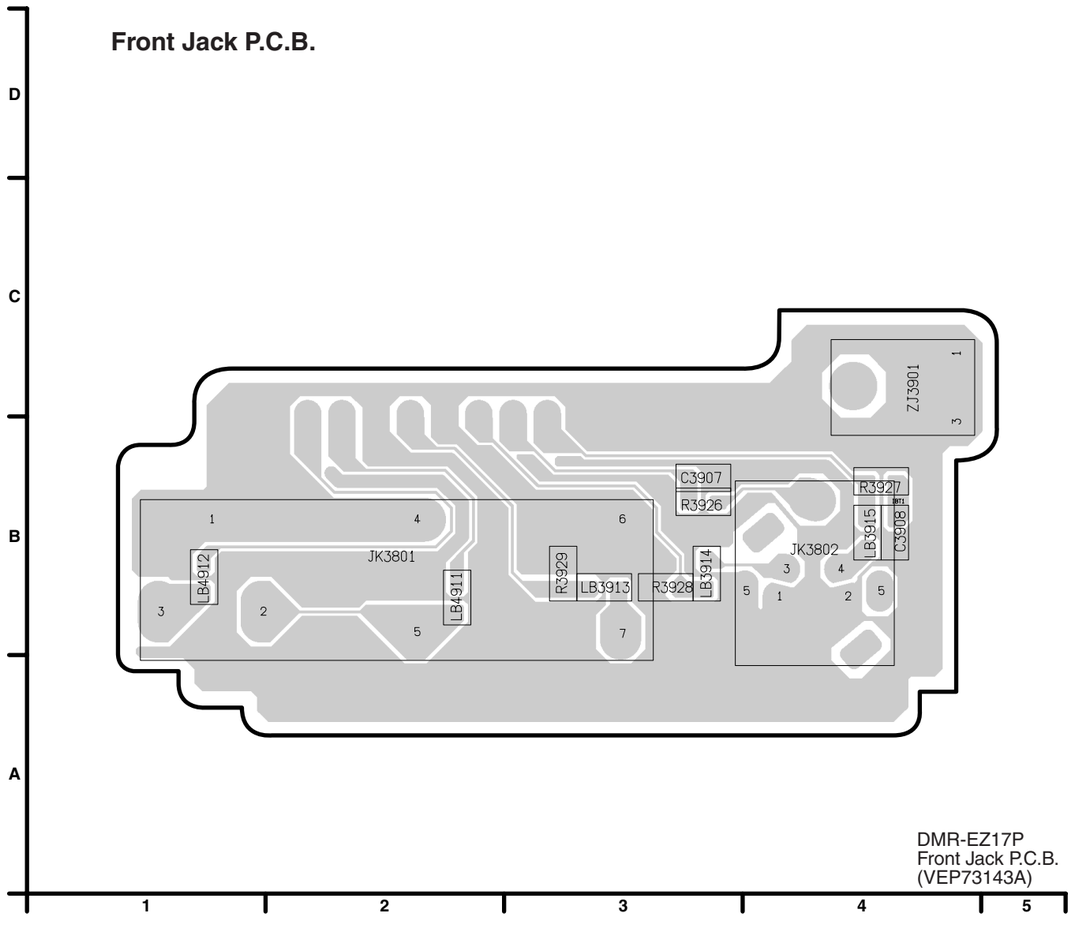


13.3. DV Jack P.C.B.



13.4. Front Jack P.C.B.

Front Jack P.C.B.



14 Appendix for Schematic Diagram

14.1. Voltage and Waveform Chart

Note)

Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

14.1.1. Main P.C.B.

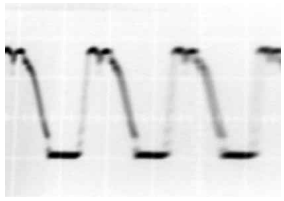
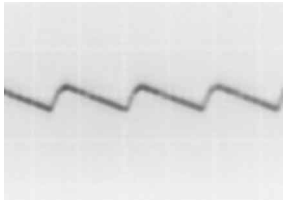
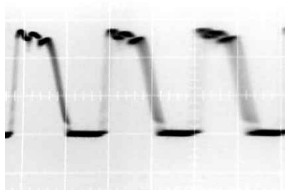
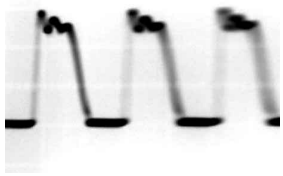
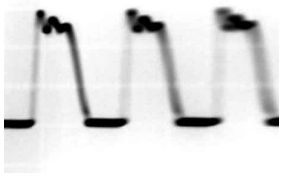
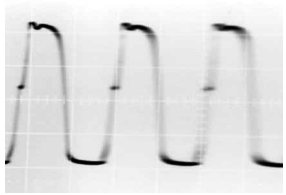
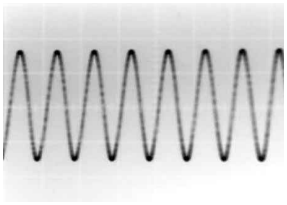
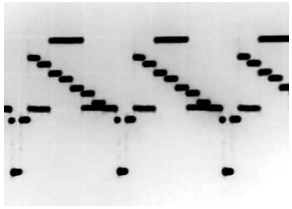
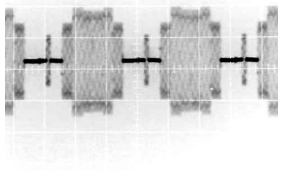
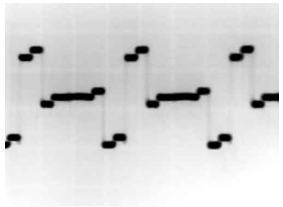
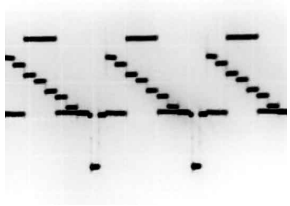
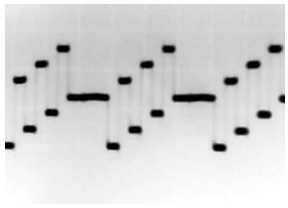
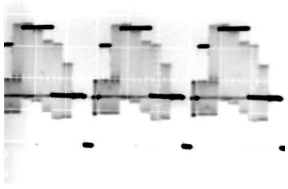
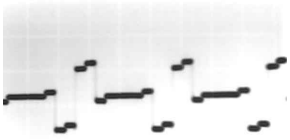
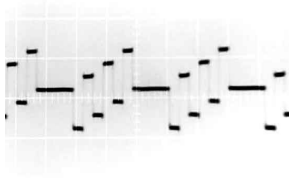
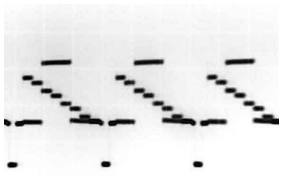
Ref No.	IC1150						IC1200				IC1500									
MODE	1	2	3	4	5		1	2	3		1	2	3	4	5	6	7	8		
REC	2.4	1.8	0	13.2	-560		5.0	2.5	0		3.3	-	1.9	0	3.3	-	-	4.0		
PLAY	2.4	1.8	0	13.2	-560		5.0	2.5	0		3.3	-	1.9	0	3.3	-	-	4.0		
STOP	2.4	1.8	0	13.2	-560		5.0	2.5	0		3.3	-	1.9	0	3.3	-	-	4.0		
Ref No.	IC1510						IC1520									IC1530				
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8		1	2	3	4	
REC	6.0	0	6.0	5.2	5.2		12.4	4.5	1.2	1.1	0.8	0	10.6	12.4		4.0	3.3	0	2.8	
PLAY	6.0	0	6.0	5.2	5.2		12.4	4.5	1.2	1.1	0.8	0	10.6	12.4		4.0	3.3	0	2.8	
STOP	6.0	0	6.0	5.2	5.2		12.4	4.5	1.2	1.1	0.8	0	10.6	12.4		4.0	3.3	0	2.8	
Ref No.	IC1540						IC1550						IC1560							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3	4	5	6	7	
REC	6.0	2.8	5.0	2.5	0		6.0	0	4.1	5.0	5.0		6.0	-	0	3.4	4.9	0	6.0	
PLAY	6.0	2.8	5.0	2.5	0		6.0	0	4.1	5.0	5.0		6.0	-	0	3.4	4.9	0	6.0	
STOP	6.0	2.8	5.0	2.5	0		6.0	0	4.1	5.0	5.0		6.0	-	0	3.4	4.9	0	6.0	
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	5.0	0	2.5	5.0	1.8	4.9	1.4	4.7	0.1	2.7	0	5.0	-	5.0	0	0	5.0	0	1.4	4.9
PLAY	5.0	0	2.5	5.0	1.8	4.9	1.4	4.7	0.1	2.7	0	5.0	-	5.0	0	0	5.0	0	1.4	4.9
STOP	5.0	0	2.5	5.0	1.8	1.6	1.4	4.7	0.1	2.7	0	5.0	-	5.0	0	0	5.0	0	1.4	4.9
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	1.4	0	0.1	2.7	4.9	1.8	1.8	1.9	1.9	2.2	0	2.2	2.2	2.2	2.2	1.7	1.7	0	1.8	5.0
PLAY	1.4	0	0.1	2.7	4.9	1.8	1.8	1.9	1.9	2.2	0	2.2	2.2	2.2	2.2	1.7	1.7	0	1.8	5.0
STOP	1.4	0	0.1	2.7	4.9	1.8	1.8	1.9	1.9	2.2	0	2.2	2.2	2.2	2.2	1.7	1.7	0	1.8	5.0
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	2.8	0	2.8	4.9	4.9	2.8	1.8	-	4.9	0	2.8	4.9	4.9	2.9	1.1	0	5.1	5.1	5.1	0.1
PLAY	2.8	0	2.8	4.9	4.9	2.8	1.8	-	4.9	0	2.8	4.9	4.9	2.9	1.1	0	5.1	5.1	5.1	0.1
STOP	2.8	0	2.8	4.9	4.9	2.8	1.8	-	4.9	0	2.8	4.9	4.9	2.9	1.1	0	5.1	5.1	5.1	0.1
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	-	0.8	0.8	5.0	1.3	-	-	-	2.0	0	-	5.0	-	0	-	0	0	5.0	-	0
PLAY	-	0.8	0.8	5.0	1.3	-	-	-	2.0	0	-	5.0	-	0	-	0	0	5.0	-	0
STOP	-	0.8	0.8	5.0	1.3	-	-	-	2.0	0	-	5.0	-	0	-	0	0	5.0	-	0
Ref No.	IC4001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	-	4.5	4.5	-	-	-	-	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	-	0	5.0
PLAY	-	4.5	4.5	-	-	-	-	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	-	0	5.0
STOP	-	4.5	4.5	-	-	-	-	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0	-	0	5.0
Ref No.	IC4001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
REC	5.0	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	9.0	4.5	4.5								
PLAY	5.0	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	9.0	4.5	4.5								
STOP	5.0	0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	9.0	4.5	4.5								
Ref No.	IC4002						IC4003						IC4901							
MODE	1	2	3	4	5		1	2	3	4	5		1	2	3					
REC	1.3	0	4.8	6.0	5.1		4.8	0	1.3	9.0	12.4		1.7	4.9	0					
PLAY	1.3	0	4.8	6.0	5.1		4.8	0	1.3	9.0	12.4		1.7	4.9	0					
STOP	1.3	0	4.8	6.0	5.1		4.8	0	1.3	9.0	12.4		1.7	4.9	0					
Ref No.	IC7301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	2.4	2.4	2.4	3.1	2.4	0	2.2	-	5.0	5.0	2.4	2.8	2.4	2.3	2.4	2.4	2.5	2.5	5.0	2.0
PLAY	2.4	2.4	2.4	3.1	2.4	0	2.2	-	5.0	5.0	2.4	2.8	2.4	2.3	2.4	2.4	2.5	2.5	5.0	2.0
STOP	2.4	2.4	2.4	3.1	2.4	0	2.2	-	5.0	5.0	2.4	2.8	2.4	2.3	2.4	2.4	2.5	2.5	5.0	2.0
Ref No.	IC7301																			
MODE	21	22	23	24																
REC	2.4	1.5	2.4	2.4																
PLAY	2.4	1.5	2.4	2.4																
STOP	2.4	1.5	2.4	2.4																

Ref No.	IC7501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	0	5.0	0	4.9	4.9	4.9	4.9	4.9	5.0	1.3	2.1	0	0.5	0.6	0	5.0	5.0	5.0	4.7	0
PLAY	0	5.0	0	4.9	4.9	4.9	4.9	4.9	5.0	1.3	2.1	0	0.5	0.6	0	5.0	5.0	5.0	4.7	0
STOP	0	5.0	0	4.9	4.9	4.9	4.9	4.9	5.0	1.3	2.1	0	0.5	0.6	0	5.0	5.0	5.0	4.7	0
Ref No.	IC7501																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	0	4.7	4.9	5.0	4.9	4.9	4.9	0.6	5.0	-	0	-	3.1	4.9	4.9	4.9	4.8	0	0	0
PLAY	0	4.7	4.9	5.0	4.9	4.9	4.9	0.3	5.0	-	0	-	3.1	4.9	4.9	4.9	4.8	0	0	0
STOP	0	4.7	4.9	5.0	4.9	4.9	4.9	0.6	5.0	-	0	-	3.1	4.9	4.9	4.9	4.8	0	0	0
Ref No.	IC7501																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	0	0	0	-8.5	-8.3	-8.3	-8.3	-10.4	-10.4	-10.4	-5.0	-10.4	-10.4	-10.4	-4.9	-4.9	-10.4	-10.4	-5.8	-8.6
PLAY	0	0	0	-8.5	-8.3	-8.3	-8.3	-8.3	-8.3	-8.3	-1.5	-8.3	-8.3	-10.4	-0.6	-2.2	-5.0	-4.6	-0.4	-4.6
STOP	0	0	0	-8.5	-8.3	-8.3	-8.3	-10.4	-10.4	-10.4	-5.0	-10.4	-10.4	-10.4	-4.9	-4.9	-10.4	-10.4	-5.8	-8.6
Ref No.	IC7501																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	-8.6	-8.6	-8.6	-9.1	-8.6	-	-	-	-	-	4.9	-	-	0	-0.4	0	0	0	0	0
PLAY	-12.1	-12.1	-12.1	-2.2	-12.1	-	-	-	-	-	4.9	-	-	0	-0.4	0	0	0	0	0
STOP	-8.6	-8.6	-8.6	-9.1	-8.6	-	-	-	-	-	4.9	-	-	0	-0.4	0	0	0	0	0
Ref No.	IC7501																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
REC	0	0	0	0	0	-	0	0	0	-12.3	0	0	0	0	-	-	4.9	0	-	4.9
PLAY	0	0	0	0	0	-	0	0	0	-12.3	0	0	0	0	-	-	4.9	0	-	4.9
STOP	0	0	0	0	0	-	0	0	0	-12.3	0	0	0	0	-	-	4.9	0	-	4.9
Ref No.	IC7504									IC7512						IC7514				
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5		1	2	3	4	5
REC	5.7	1.3	1.3	0	0.2	0.2	0.2	12.4		0	0	-	4.9	5.0		4.9	5.2	0	-	-
PLAY	5.7	1.3	1.3	0	0.2	0.2	0.2	12.4		0	0	-	4.9	5.0		4.9	5.2	0	-	-
STOP	5.7	1.3	1.3	0	0.2	0.2	0.2	12.4		0	0	-	4.9	5.0		4.9	5.2	0	-	-
Ref No.	Q1200					Q1520							Q4003				Q4004			
MODE	1	2	3	4		1	2	3	4	5	6		E	C	B		E	C	B	
REC	6.0	5.0	0	1.8		2.3	2.3	10.6	12.4	2.3	2.3		0	0	-0.2		0	0	-0.2	
PLAY	6.0	5.0	0	1.8		2.3	2.3	10.6	12.4	2.3	2.3		0	0	-0.2		0	0	-0.2	
STOP	6.0	5.0	0	1.8		2.3	2.3	10.6	12.4	2.3	2.3		0	0	-0.3		0	0	-0.3	
Ref No.	Q7402				Q7502				Q7503				Q7509							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
REC	0	4.9	0		0	9.1	-0.2		0	-0.2	-0.4		5.1	12.4	5.5					
PLAY	0	4.9	0		0	9.3	-0.1		0	-0.1	-0.4		5.1	12.4	5.5					
STOP	0	4.9	0		0	9.1	-0.2		0	-0.2	-0.4		5.1	12.4	5.5					
Ref No.	Q7801				Q7802															
MODE	E	C	B		E	C	B													
REC	2.6	0	2.0		0	0.1	0.6													
PLAY	2.6	0	2.0		0	0.1	0.6													
STOP	2.6	0	2.0		0	0.1	0.6													
Ref No.	QR4001				QR4002				QR4003				QR7401				QR7801			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	0	2.3		5.1	-0.2	5.1		0	5.1	0		0	0	4.9		36.7	36.7	0.1	
PLAY	0	0	2.3		5.1	-0.2	5.1		0	5.1	0		0	0	4.9		36.7	36.7	0.1	
STOP	0	0	2.3		5.1	-0.2	5.1		0	5.1	0		0	0	4.9		36.7	36.7	0.1	

14.1.2. P56001 Connector

Ref No.	P56001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	3.3	3.3	0	3.3	0	4.9	0	4.8	0	0.1	0	0	0	3.0	0	5.0	0	3.3	4.1	0
PLAY	3.3	3.3	0	3.3	0	4.9	0	4.8	0	0.1	0	0	0	3.0	0	5.0	0	3.3	4.1	0
STOP	3.3	3.3	0	3.3	0	4.9	0	4.8	0	0.1	0	0	0	3.0	0	5.0	0	3.3	4.1	0
Ref No.	P56001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	3.3	1.4	0	0	4.9	4.9	0	0	5.8	4.9	0	0	3.3	0	0	0	5.1	2.1	0	0
PLAY	3.3	1.4	0	0	4.9	4.9	0	0	5.8	4.9	0	0	3.3	0	0	0	5.1	2.1	0	0
STOP	3.3	1.4	0	0	4.9	4.9	0	0	5.8	4.9	0	0	3.3	0	0	0	5.1	2.1	0	0
Ref No.	P56001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	3.3	1.2	3.3	0	0	0	3.5	0.6	3.5	0	3.5	0.5	0	0	12.2	0.6	0	0	1.7	0.7
PLAY	3.3	1.2	3.3	0	0	0	3.5	0.6	3.5	0	3.5	0.5	0	0	12.2	0.6	0	0	1.7	0.7
STOP	3.3	1.2	3.3	0	0	0	3.5	0.6	3.5	0	3.5	0.5	0	0	12.2	0.6	0	0	1.7	0.7
Ref No.	P56001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	1.7	0	1.7	0.5	0	0	2.2	2.3	0	0	0	5.0	0	0	0	0	0	2.5	0	2.5
PLAY	1.7	0	1.7	0.5	0	0	2.2	2.3	0	0	0	5.0	0	0	0	0	0	2.5	0	2.5
STOP	1.7	0	1.7	0.5	0	0	2.2	2.3	0	0	0	5.0	0	0	0	0	0	2.5	0	2.5
Ref No.	P56001																			
MODE	81	82	83	84	85	86	87	88												
REC	0	0	3.3	2.5	0	2.5	3.3	0												
PLAY	0	0	3.3	2.5	0	2.5	3.3	0												
STOP	0	0	3.3	2.5	0	2.5	3.3	0												

14.2. Waveform Chart

 T1101-3 STOP 30Vp-p (5 μ sec.div)	 T1101-4 STOP 360Vp-p (5 μ sec.div)	 T1101-6 STOP 20Vp-p (5m sec.div)	 T1101-7 STOP 10Vp-p (5 μ sec.div)
 T1101-8 STOP 30Vp-p (5 μ sec.div)	 T1101-11,12 STOP 15Vp-p (5 μ sec.div)	 IC1150-1 STOP 9.0Vp-p (5 μ sec.div)	 IC1150-2 STOP 0.5Vp-p (5 μ sec.div)
 P7401-78,80 REC/PLAY 0.8Vp-p (1m sec.div)	 P7401-64 REC/PLAY 1.0Vp-p (20 μ sec.div)	 P7401-60 REC/PLAY 0.8Vp-p (20 μ sec.div)	 P7401-56 REC/PLAY 0.6Vp-p (20 μ sec.div)
 P7401-52 REC/PLAY 1.0Vp-p (20 μ sec.div)	 P7401-48 REC/PLAY 0.6Vp-p (20 μ sec.div)	 P7401-42 REC/PLAY 1.0Vp-p (20 μ sec.div)	 JK3903-2 REC/PLAY 1.0Vp-p (20 μ sec.div)
 JK3903-3 REC/PLAY 1.0Vp-p (20 μ sec.div)	 JK3903-4 REC/PLAY 2.0Vp-p (20 μ sec.div)		

14.3. Abbreviations

INITIAL/LOGO		ABBREVIATIONS
A	A0~UP	ADDRESS
	ACLK	AUDIO CLOCK
	AD0~UP	ADDRESS BUS
	ADATA	AUDIO PES PACKET DATA
	ALE	ADDRESS LATCH ENABLE
	AMUTE	AUDIO MUTE
	AREQ	AUDIO PES PACKET REQUEST
	ARF	AUDIO RF
	ASI	SERVO AMP INVERTED INPUT
	ASO	SERVO AMP OUTPUT
	ASYNC	AUDIO WORD DISTINCTION SYNC
B	BCK	BIT CLOCK (PCM)
	BCKIN	BIT CLOCK INPUT
	BDO	BLACK DROP OUT
	BLKCK	SUB CODE BLOCK CLOCK
	BOTTOM	CAP. FOR BOTTOM HOLD
	BYP	BYPATH
	BYTCK	BYTE CLOCK
C	CAV	CONSTANT ANGULAR VELOCITY
	CBDO	CAP. BLACK DROP OUT
	CD	COMPACT DISC
	CDSCK	CD SERIAL DATA CLOCK
	CDSRDATA	CD SERIAL DATA
	CDRF	CD RF (EFM) SIGNAL
	CDV	COMPACT DISC-VIDEO
	CHNDATA	CHANNEL DATA
	CKSL	SYSTEM CLOCK SELECT
	CLV	CONSTANT LINEAR VELOCITY
	COFTR	CAP. OFF TRACK
	CPA	CPU ADDRESS
	CPCS	CPU CHIP SELECT
	CPDT	CPU DATA
	CPUADR	CPU ADDRESS LATCH
	CPUADT	CPU ADDRESS DATA BUS
	CPUIRQ	CPU INTERRUPT REQUEST
	CPRD	CPU READ ENABLE
	CPWR	CPU WRITE ENABLE
	CS	CHIP SELECT
	CSYNCIN	COMPOSITE SYNC IN
	CSYNCOUT	COMPOSITE SYNC OUT
D	DACCK	D/A CONVERTER CLOCK
	DEEMP	DEEMPHASIS BIT ON/OFF
	DEMPH	DEEMPHASIS SWITCHING
	DIG0~UP	FL DIGIT OUTPUT
	DIN	DATA INPUT
	DMSRCK	DM SERIAL DATA READ CLOCK
	DMUTE	DIGITAL MUTE CONTROL
	DO	DROP OUT
	DOUT0~UP	DATA OUTPUT
	DRF	DATA SLICE RF (BIAS)
	DRPOUT	DROP OUT SIGNAL
	DREQ	DATA REQUEST
	DRESP	DATA RESPONSE
	DSC	DIGITAL SERVO CONTROLLER
	DSLF	DATA SLICE LOOP FILTER
	DVD	DIGITAL VIDEO DISC

INITIAL/LOGO		ABBREVIATIONS
E	EC	ERROR TORQUE CONTROL
	ECR	ERROR TORQUE CONTROL REFERENCE
	ENCSEL	ENCODER SELECT
	ETMCLK	EXTERNAL M CLOCK (81MHz/40.5MHz)
	ETSCLK	EXTERNAL S CLOCK (54MHz)
F	FBAL	FOCUS BALANCE
	FCLK	FRAME CLOCK
	FE	FOCUS ERROR
	FFI	FOCUS ERROR AMP INVERTED INPUT
	FEO	FOCUS ERROR AMP OUTPUT
	FG	FREQUENCY GENERATOR
	FSC	FREQUENCY SUB CARRIER
	FSCK	FS (384 OVER SAMPLING) CLOCK
G	GND	COMMON GROUNDING (EARTH)
H	HA0~UP	HOST ADDRESS
	HD0~UP	HOST DATA
	HINT	HOST INTERRUPT
	HRXW	HOST READ/WRITE

INITIAL/LOGO		ABBREVIATIONS
I	IECOUT	IEC958 FORMAT DATA OUTPUT
	IPFRAG	INTERPOLATION FLAG
	IREF	I (CURRENT) REFERENCE
	ISEL	INTERFACE MODE SELECT
L	LDON	LASER DIODE CONTROL
	LPC	LASER POWER CONTROL
	LRCK	L CH/R CH DISTINCTION CLOCK
M	MA0~UP	MEMORY ADDRESS
	MCK	MEMORY CLOCK
	MCKI	MEMORY CLOCK INPUT
	MCLK	MEMORY SERIAL COMMAND CLOCK
	MDATA	MEMORY SERIAL COMMAND DATA
	MDQ0~UP	MEMORY DATA INPUT/OUTPUT
	MDQM	MEMORY DATA I/O MASK
	MLD	MEMORY SERIAL COMMAND LOAD
	MPEG	MOVING PICTURE EXPERTS GROUP
O	ODC	OPTICAL DISC CONTROLLER
	OFTR	OFF TRACKING
	OSCI	OSCILLATOR INPUT
	OSCO	OSCILLATOR OUTPUT
	OSD	ON SCREEN DISPLAY
P	P1~UP	PORT
	PCD	CD TRACKING PHASE DIFFERENCE
	PCK	PLL CLOCK
	PDVD	DVD TRACKING PHASE DIFFERENCE
	PEAK	CAP. FOR PEAK HOLD
	PLLCLK	CHANNEL PLL CLOCK
	PLLOK	PLL LOCK
	PWMCTL	PWM OUTPUT CONTROL
	PWMDA	PULSE WAVE MOTOR DRIVE A
	PWMOA, B	PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
	RSV	RESERVE
S	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECT CLOCK
	SEN	SERIAL PORT ENABLE
	SIN1, 2	SERIAL DATA IN
	SOUT1, 2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK
	SQCX	SUB CODE Q DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY SELECT
	STVALID	STREAM DATA VALIDITY
	SUBC	SUB CODE SERIAL
	SBCK	SUB CODE CLOCK
	SUBQ	SUB CODE Q DATA
	SYSCLK	SYSTEM CLOCK

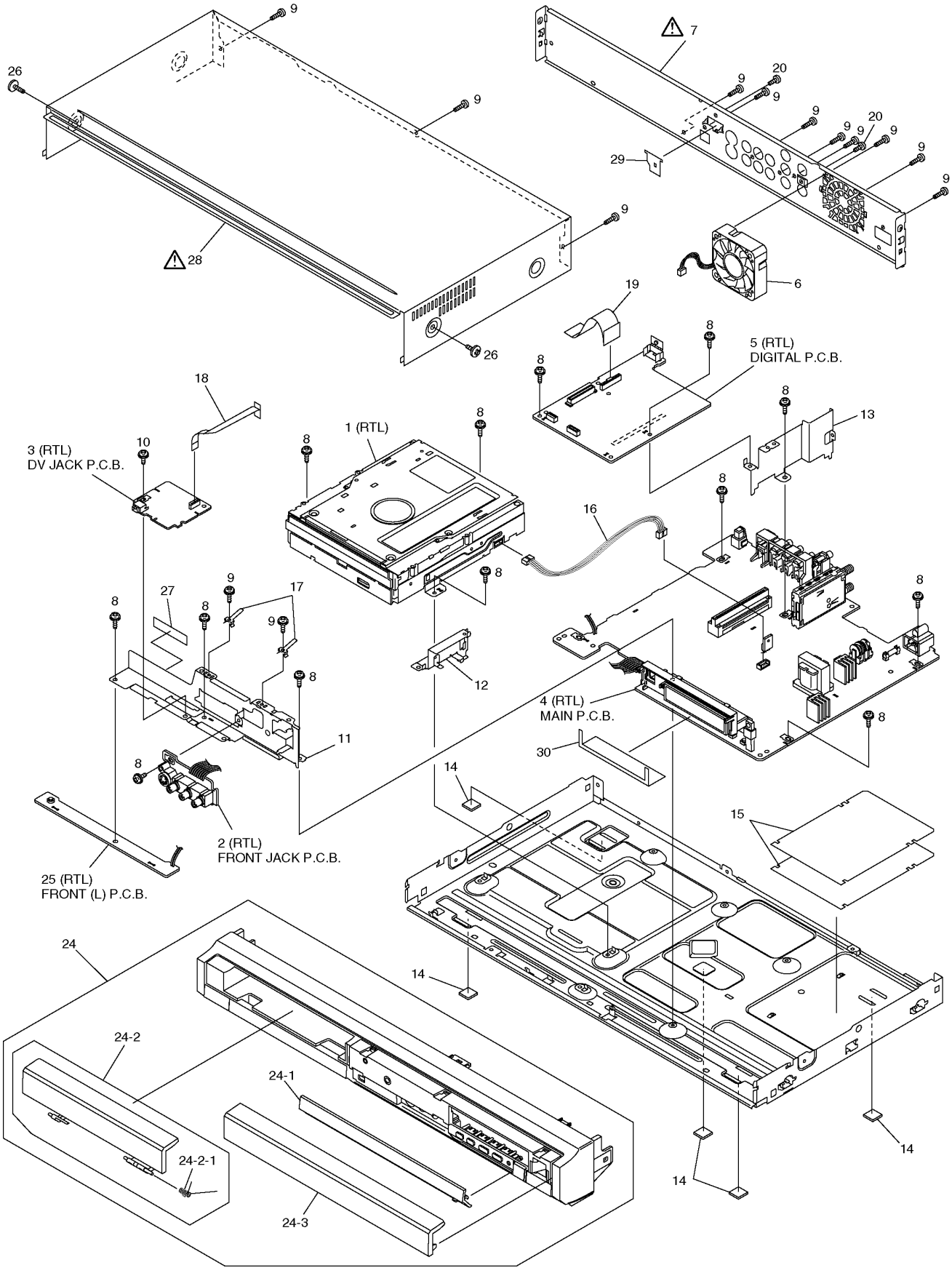
INITIAL/LOGO		ABBREVIATIONS
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSS SIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
	VSS	SOURCE POWER SUPPLY VOLTAGE
W	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
	WSR	WORD SELECT RECEIVER
X	X	X´ TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPT REQUEST
	XI	X´ TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X´ TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIP SELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

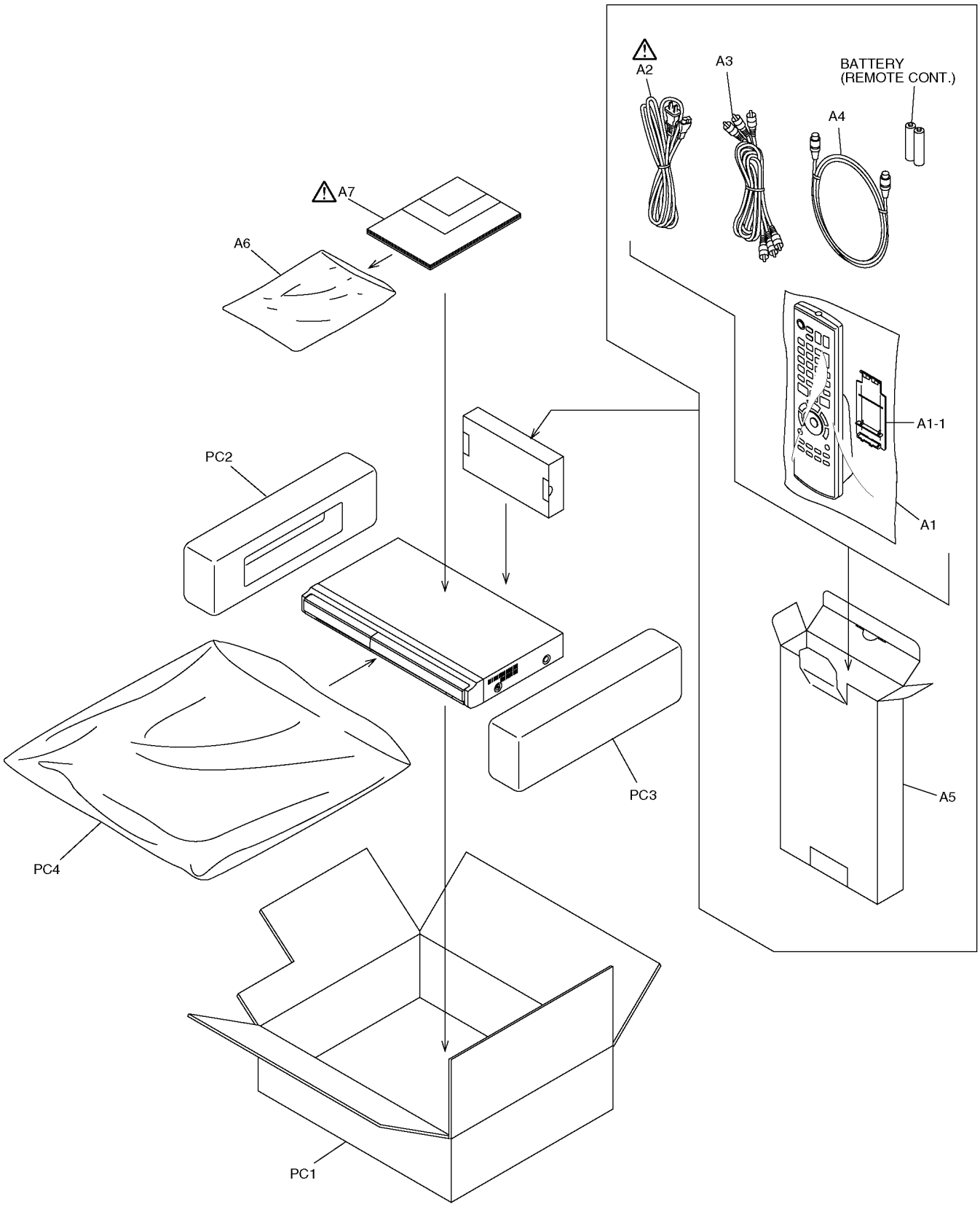
15 Parts and Exploded Views

15.1. Exploded Views

15.1.1. Casing Parts & Mechanism Section



15.1.2. Packing & Accessories Section



15.2. Replacement Parts List

Notes:

*Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μF) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

*"(IA)", mark in Remarks indicates language of instruction manual. [(IA): English]

*All parts are supplied by PAVCSG.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP79141A	MAIN P.C.B.	1	(RTL)
C1101	ECQU2A683MLA	0.068U	1	⚠
C1102	F1B2G1020002	1000P	1	⚠
C1103	F1B2G1020002	1000P	1	⚠
C1104	ECQU2A223MLA	0.022U	1	⚠
C1107	F2B2E1010002	250V 10P	1	
C1108	F1B2G1020002	1000P	1	⚠
C1150	F2A1V5600013	35V 56U	1	
C1151	F1B3A182A009	250V 1800P	1	
C1152	ECJ1VB1H102K	50V 1000P	1	
C1153	ECJ1VC1H101J	50V 100P	1	
C1154	F1H1H222A798	50V 2200P	1	
C1201	ECJ1VB1A224K	10V 0.22U	1	
C1203	ECJ1VB1C473K	16V 0.047U	1	
C1260	F2A1A1820007	10V 1800U	1	
C1261	F2A1A2210063	10V 220U	1	
C1270	F2A1C681A624	16V 680U	1	
C1271	F2A1E2210050	25V 220U	1	
C1273	F2A1C1210017	16V 120P	1	
C1280	F2A1A6810022	10V 680P	1	
C1281	F2A1A1010072	10V 100U	1	
C1500	F1H1A105A028	10V 1U	1	
C1501	ECJ1VB0J105K	6.3V 1U	1	
C1502	ECJ1VB1H103K	50V 0.01U	1	
C1503	F1J0J106A014	6.3V 10U	1	
C1510	F1H1A105A028	10V 1U	1	
C1511	F1H1A105A028	10V 1U	1	
C1520	F2A1C1210012	16V 120P	1	
C1521	F1H1C105A095	16V 1U	1	
C1522	F1H1C104A071	16V 0.1U	1	
C1523	F1H1C104A071	16V 0.1U	1	
C1524	ECJ1VC1H270J	50V 27P	1	
C1526	ECJ1VB1H103K	50V 0.01U	1	
C1527	F2A1C4710079	16V 470P	1	
C1530	F1H1A105A028	10V 1U	1	
C1532	F2A1A1010072	10V 100U	1	
C1540	F1H1A105A028	10V 1U	1	
C1550	F1H1A105A028	10V 1U	1	
C1551	ECJ1VB0J105K	6.3V 1U	1	
C1552	F1J0J106A014	6.3V 10U	1	
C1560	F1H1A105A028	10V 1U	1	
C1561	F2A1A1010072	10V 100U	1	
C1563	ECJ1VB1H103K	50V 0.01U	1	
C3001	F1H1C104A071	16V 0.1U	1	
C3002	ECJ1VB1C333K	16V 0.033U	1	
C3003	F1H1C104A071	16V 0.1U	1	
C3008	ECJ1VB1H103K	50V 0.01U	1	
C3009	ECJ1VB1H103K	50V 0.01U	1	
C3010	F2A1H220B040	50V 22U	1	
C3011	ECJ1VB1H103K	50V 0.01U	1	
C3013	F2A1C470B110	16V 47P	1	
C3015	ECJ1VB1H103K	50V 0.01U	1	
C3016	ECJ1VB1H103K	50V 0.01U	1	
C3017	ECJ1VB1H103K	50V 0.01U	1	
C3018	ECJ1VB1H103K	50V 0.01U	1	
C3019	F2A1H100B040	50V 10P	1	
C3021	ECJ1VB1H103K	50V 0.01U	1	
C3022	F2A1C470B110	16V 47P	1	
C3025	ECJ1VB1H103K	50V 0.01U	1	
C3026	F1H1C104A071	16V 0.1U	1	
C3027	F2A1C470B110	16V 47P	1	
C3028	ECJ1VB1H103K	50V 0.01U	1	
C3029	ECJ1VB1H103K	50V 0.01U	1	
C3031	ECJ1VB1H103K	50V 0.01U	1	
C3032	F2A1E470B030	25V 47U	1	
C3033	F2A0J102A833	6.3V 1000P	1	
C3035	F2A0J331A832	6.3V 330P	1	
C3036	F2A0J331A832	6.3V 330P	1	
C3038	F2A0J102A833	6.3V 1000P	1	
C3040	F2A0J102A833	6.3V 1000P	1	
C3042	ECJ1VB1H103K	50V 0.01U	1	
C3901	ECJ1VB1H103K	50V 0.01U	1	
C3903	F1H1C104A071	16V 0.1U	1	
C3909	ECJ1VB1H103K	50V 0.01U	1	
C4001	F2A1H1R0B032	50V 1U	1	
C4002	F2A1H1R0B032	50V 1U	1	
C4003	F1H1C104A071	16V 0.1U	1	
C4004	F1H1C104A071	16V 0.1U	1	
C4005	ECJ1VB1C105K	16V 1U	1	
C4006	ECJ1VB1C105K	16V 1U	1	
C4007	ECJ2VB1E104K	25V 0.1U	1	
C4008	F1H1C104A071	16V 0.1U	1	
C4011	F1H1C104A071	16V 0.1U	1	
C4012	F2A1C221B111	16V 220P	1	
C4013	ECJ1VC1H560J	50V 56P	1	
C4014	ECJ1VC1H560J	50V 56P	1	
C4017	ECJ1VF1C104Z	16V 0.1U	1	
C4018	F2A1C221B111	16V 220P	1	
C4019	F2A1H1R0B032	50V 1U	1	
C4020	F2A1H1R0B032	50V 1U	1	
C4021	F2A1E470B030	25V 47U	1	
C4022	F2A1E470B030	25V 47U	1	
C4023	F2A1H100B040	50V 10P	1	
C4024	F2A1H100B040	50V 10P	1	
C4025	F2A1E470B030	25V 47U	1	
C4026	F2A1E470B030	25V 47U	1	
C4029	ECJ2VC1H102J	50V 1000P	1	
C4030	ECJ2VC1H102J	50V 1000P	1	
C4031	F2A0J471A832	6.3V 470P	1	
C4032	ECJ1VF1C104Z	16V 0.1U	1	
C4033	ECQV1H104JL3	50V 0.1U	1	
C4034	ECJ1VF1C104Z	16V 0.1U	1	
C4035	ECJ1VF1C104Z	16V 0.1U	1	
C4036	ECQV1H104JL3	50V 0.1U	1	
C4038	F2A1C471B112	16V 470P	1	
C4904	F2A0J470A824	6.3V 47P	1	
C4905	F1H1C104A071	16V 0.1U	1	
C7301	F2A0J220A878	6.3V 22P	1	
C7302	F2A1H4R7B033	50V 4.7U	1	
C7304	F2A0J220A878	6.3V 22P	1	
C7305	F2A1H4R7B033	50V 4.7U	1	
C7306	F2A1H4R7B033	50V 4.7U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7308	ECJ1VB1C473K	16V 0.047U	1	
C7310	F2A0J470A824	6.3V 47P	1	
C7311	ECJ1VB1H103K	50V 0.01U	1	
C7312	F1H1C104A071	16V 0.1U	1	
C7313	F2A1C100B099	16V 10P	1	
C7314	F2A1H2R2B032	50V 2.2U	1	
C7316	ECJ1VB0J105K	6.3V 1U	1	
C7317	ECJ1VB0J105K	6.3V 1U	1	
C7318	ECJ1VB0J105K	6.3V 1U	1	
C7319	ECJ1VB0J105K	6.3V 1U	1	
C7320	F1H1C104A071	16V 0.1U	1	
C7321	ECJ1VB0J105K	6.3V 1U	1	
C7322	F2A1H2R2B032	50V 2.2U	1	
C7403	F1J0J106A014	6.3V 10U	1	
C7504	ECJ1VC1H101J	50V 100P	1	
C7505	ECJ1VC1H101J	50V 100P	1	
C7506	ECJ1VC1H101J	50V 100P	1	
C7507	ECJ1VB1H103K	50V 0.01U	1	
C7508	ECJ1VB1H103K	50V 0.01U	1	
C7509	ECJ1VB1H103K	50V 0.01U	1	
C7510	ECJ1VC1H180J	50V 18P	1	
C7511	F1H1H150A799	50V 15P	1	
C7512	ERJ3GEY0R00V	1/10W 0	1	
C7514	F1H1C104A071	16V 0.1U	1	
C7516	F1H1C104A071	16V 0.1U	1	
C7520	F1H1C104A071	16V 0.1U	1	
C7521	ECJ1VC1H101J	50V 100P	1	
C7522	F2A0J470A824	6.3V 47P	1	
C7523	F1H1A105A028	10V 1U	1	
C7524	F2A1H100B040	50V 10P	1	
C7525	ECJ1VB1H103K	50V 0.01U	1	
C7527	F2A1E221B032	25V 220U	1	
C7530	F2A1C221A243	16V 220P	1	
C7531	ECQB1H392KF3	50V 3900P	1	
C7532	F2A1V470A190	35V 47P	1	
C7533	F2A1H100A248	50V 10P	1	
C7538	F2A0J471A832	6.3V 470P	1	
C7559	ECJ1VB0J105K	6.3V 1U	1	
C7560	ECJ1VB1H103K	50V 0.01U	1	
C7561	F1H1C104A071	16V 0.1U	1	
C7802	ECJ1VB1A105K	10V 1U	1	
C7807	ECJ1VB0J105K	6.3V 1U	1	
C7823	F2A0J470A824	6.3V 47P	1	
C7825	ECJ1VC1H180J	50V 18P	1	
C7826	F2A0J470A824	6.3V 47P	1	
C7827	F2A1H1R0B032	50V 1U	1	
C7828	ECJ1VC1H180J	50V 18P	1	
C7829	ECJ1VB1H103K	50V 0.01U	1	
C7830	F2A0J470A824	6.3V 47P	1	
C7831	F1H1C104A071	16V 0.1U	1	
C7835	ECJ1VB1H103K	50V 0.01U	1	
C7836	ECJ1VB1H103K	50V 0.01U	1	
C7839	ECJ1VB1H103K	50V 0.01U	1	
D1101	B0EDKT000009	DIODE	1	
D1150	B0AADM000003	DIODE	1	
D1151	MAZ73000BC	DIODE	1	
D1152	B0AACK000004	DIODE	1	
D1153	MAZ4130NMF	DIODE	1	
D1260	B0JBSE000020	DIODE	1	
D1270	B0JAQG000005	DIODE	1	
D1280	B0JAQE000004	DIODE	1	
D1500	B0EAKL000062	DIODE	1	
D1501	B0EAKL000062	DIODE	1	
D1502	MA2C700A0F	DIODE	1	
D1520	B0JCPD000021	DIODE	1	
D1521	B0JCPE000015	DIODE	1	
D1522	B0JCPE000015	DIODE	1	
D1530	B0JCPE000015	DIODE	1	
D1531	B0JCPE000015	DIODE	1	
D1550	B0AACK000004	DIODE	1	
D4001	MA2C165001VT	DIODE	1	
D7401	MA2C165001VT	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D7502	B0AACK000004	DIODE	1	
D7504	MAZ4100NMF	DIODE	1	
D7506	B0HAMP000067	DIODE	1	
D7507	B0AADM000003	DIODE	1	
D7508	B0AADM000003	DIODE	1	
D7510	B0JDCE000002	DIODE	1	
D7511	MAZ4120NHF	DIODE	1	
D7512	B0BA03600021	DIODE	1	
D7801	B0BA03000015	DIODE	1	
DP7501	A2BD00000169	DISPLAY TUBE	1	
DZ1101	J0LY00000045	SERGE ABSORBER	1	⚠
F1101	K5D202BK0005	FUSE	1	⚠
FL7301	J0B4504AA026	FL DISPLAY	1	
IC1150	C0DACZH00022	IC	1	
IC1200	C0DAEYY00021	IC	1	
IC1500	C0CBCBD00048	IC	1	
IC1510	C0CBCDC00054	IC	1	
IC1520	C0DBAYY00219	IC	1	
IC1530	C0DAGYY00030	IC	1	
IC1540	C0CBCYG00004	IC	1	
IC1550	C0CBCDC00052	IC	1	
IC1560	C0DBGHF00001	IC	1	
IC3001	C1AB00001979	IC	1	
IC4001	C1AB00001920	IC	1	
IC4002	C0DBAHD00013	IC	1	
IC4003	C0CBCDC00037	IC	1	
IC4901	B3ZAZ0000016	IC	1	
IC7301	C1AB00002666	IC	1	
IC7501	MN67789CA	IC	1	
IC7504	C0ABBA000073	IC	1	
IC7512	C0EBE0000504	IC	1	
IC7514	C0EBJ0000336	IC	1	
IC7801	C0CBCDC00052	IC	1	
IP1280	K5H302YA0030	IC PROTECTOR	1	
IP7501	K5H751YA0028	IC PROTECTOR	1	
IR7501	B3RAD0000137	REMOTE SENSOR	1	
JK3901	K2HE219B0004	JACK,OUT/IN1	1	
JK3903	K2HA304B0007	JACK,COMPONENT VIDEO OUT	1	
JW3901	VWJ08H4072VV	WIRE	1	
JW7501	VWJ02H5065VV	WIRE	1	
K1500	ERJ3GEY0R00V	1/10W 0	1	
K7501	ERJ3GEY0R00V	1/10W 0	1	
L1101	G0B123E00001	COIL	1	⚠
L1260	G0A100HA0023	COIL 10UH	1	
L1270	G0A100HA0023	COIL 10UH	1	
L1271	G0A100HA0023	COIL 10UH	1	
L1280	G0A220GA0026	COIL 22UH	1	
L1520	G0A100HA0023	COIL 10UH	1	
L1521	G0A150ZA0041	COIL 15UH	1	
L3001	G0C220JA0019	COIL 22UH	1	
L3002	G0C220JA0019	COIL 22UH	1	
L7400	G0A100HA0023	COIL 10UH	1	
L7501	G0C390JA0055	COIL 39UH	1	
LB1105	ERJ6GEY0R00V	1/8W 0	1	
LB1150	ERJ6GEY0R00V	1/8W 0	1	
LB1250	J0JHC0000048	FILTER	1	
LB4901	J0JHC0000032	COIL	1	
LB7401	ERJ3GEY0R00V	1/10W 0	1	
LB7402	ERJ3GEY0R00V	1/10W 0	1	
LB7403	ERJ3GEY0R00V	1/10W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB7404	ERJ3GEY0R00V	1/10W 0	1	
LB7405	ERJ3GEY0R00V	1/10W 0	1	
LB7408	ERJ3GEY0R00V	1/10W 0	1	
LB7409	J0JKB0000003	COIL	1	
LB7410	ERJ3GEY0R00V	1/10W 0	1	
LB7412	ERJ3GEY0R00V	1/10W 0	1	
LB7803	J0JHC0000032	COIL	1	
LB7809	J0JHC0000032	COIL	1	
LB7810	J0JCC0000103	COIL	1	
LB7811	J0JCC0000103	COIL	1	
LB7812	ERJ3GEY0R00V	1/10W 0	1	
LB7813	ERJ3GEY0R00V	1/10W 0	1	
LB7814	J0JHC0000032	COIL	1	
LB7815	ERJ3GEY0R00V	1/10W 0	1	
LB7816	ERJ3GEY0R00V	1/10W 0	1	
P1101	K2AB2B000007	AC INLET	1	⚠
P1500	K1KA04AA0180	CONNECTOR(4P)	1	
P7401	K1KA88A00002	CONNECTOR(88P)	1	
P7504	K1KA03AA0301	CONNECTOR(3P)	1	
Q1200	B3PBA0000454	TRANSISTOR	1	⚠
Q1520	B1DHDD000029	TRANSISTOR	1	
Q4003	2SD0601A0L	TRANSISTOR	1	
Q4004	2SD0601A0L	TRANSISTOR	1	
Q7402	2SD1819A0L	TRANSISTOR	1	
Q7502	B1BABK000001	TRANSISTOR	1	
Q7503	2SD0601A0L	TRANSISTOR	1	
Q7509	B1ABMD000004	TRANSISTOR	1	
Q7801	2SB1218A0L	TRANSISTOR	1	
Q7802	2SD1819A0L	TRANSISTOR	1	
QR4001	UNR521100L	TRANSISTOR	1	
QR4002	UNR511100L	TRANSISTOR	1	
QR4003	UNR521100L	TRANSISTOR	1	
QR7401	UNR521300L	TRANSISTOR	1	
QR7801	UNR511200L	TRANSISTOR	1	
R1150	ERJ6GEYJ100V	1/8W 10	1	
R1151	ERJ6GEYJ100V	1/8W 10	1	
R1152	ERJ3GEYJ103V	1/10W 10K	1	
R1153	ERJ3GEYJ752V	1/10W 7.5K	1	
R1154	ERJ3GEY0R00V	1/10W 0	1	
R1155	ERJ3RBD183V	1/16W 18K	1	
R1156	ERJ3RBD151V	1/16W 150	1	
R1157	ERJ3RBD682V	1/16W 6.8K	1	
R1200	ERJ3RBD223V	1/16W 22K	1	
R1201	ERJ3GEY0R00V	1/10W 0	1	
R1202	ERJ3GEYJ184V	1/10W 180K	1	
R1203	ERJ3RBD562V	1/16W 5.6K	1	
R1204	ERJ3GEYJ103V	1/10W 10K	1	
R1206	ERJ3RBD242V	1/16W 2.4K	1	
R1207	ERJ3GEYJ271V	1/10W 270	1	
R1208	ERJ3GEYJ222V	1/10W 2.2K	1	
R1209	ERJ3GEYJ102V	1/10W 1K	1	
R1500	ERJ3GEYJ822V	1/10W 8.2K	1	
R1501	ERJ3GEYJ182V	1/10W 1.8K	1	
R1520	ERJ3GEYJ333V	1/10W 33K	1	
R1521	D1BDR039A101	1/3W 0.039	1	
R1522	ERJ3GEY0R00V	1/10W 0	1	
R1523	ERJ3RBD133V	1/16W 13K	1	
R1524	ERJ3RBD682V	1/16W 6.8K	1	
R1540	ERJ3GEY0R00V	1/10W 0	1	
R1541	ERJ3RBD182V	1/16W 1.8K	1	
R1542	ERJ3RBD202V	1/16W 2K	1	
R1551	ERJ3GEYJ223V	1/10W 22K	1	
R1552	ERJ3GEYJ221V	1/10W 220	1	
R3001	ERJ3GEYJ105V	1/10W 1M	1	
R3004	ERJ3GEYJ221V	1/10W 220	1	
R3005	ERJ3GEYJ221V	1/10W 220	1	
R3006	ERJ3RBD153V	1/16W 15K	1	
R3007	ERJ3RBD104V	1/16W 100K	1	
R3009	ERJ3GEYJ103V	1/10W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3011	ERJ3GEYJ103V	1/10W 10K	1	
R3901	ERJ3GEYJ750V	1/10W 75	1	
R3902	ERJ3GEYJ750V	1/10W 75	1	
R3904	ERJ3GEYJ102V	1/10W 1K	1	
R3905	ERJ3GEYJ750V	1/10W 75	1	
R3907	ERJ3GEYJ750V	1/10W 75	1	
R3917	ERJ3GEYJ912V	1/10W 9.1K	1	
R3918	ERJ3GEYJ750V	1/10W 75	1	
R3919	ERJ3GEYJ750V	1/10W 75	1	
R3920	ERJ3GEYJ750V	1/10W 75	1	
R3921	ERJ3GEYJ750V	1/10W 75	1	
R3922	ERJ3GEYJ750V	1/10W 75	1	
R4003	ERJ3GEYJ102V	1/10W 1K	1	
R4004	ERJ3GEYJ102V	1/10W 1K	1	
R4011	ERJ3GEYJ104V	1/10W 100K	1	
R4012	ERJ3GEYJ104V	1/10W 100K	1	
R4013	ERJ3GEYJ101V	1/10W 100	1	
R4014	ERJ3GEYJ101V	1/10W 100	1	
R4015	D0HB153ZA002	1/10W 15K	1	
R4016	D0HB561ZA002	1/10W 560	1	
R4017	D0HB561ZA002	1/10W 560	1	
R4018	D0HB153ZA002	1/10W 15K	1	
R4019	ERJ3GEYJ102V	1/10W 1K	1	
R4020	ERJ3GEYJ102V	1/10W 1K	1	
R4021	D0HB103ZA002	1/10W 10K	1	
R4022	D0HB103ZA002	1/10W 10K	1	
R4023	ERJ3GEYJ104V	1/10W 100K	1	
R4024	ERJ3GEYJ104V	1/10W 100K	1	
R4025	D0HB622ZA002	1/16W 6.2K	1	
R4026	D0HB622ZA002	1/16W 6.2K	1	
R4027	D0HB392ZA002	1/16W 3.9K	1	
R4028	D0HB392ZA002	1/16W 3.9K	1	
R4029	ERJ3GEYJ103V	1/10W 10K	1	
R4030	ERJ3GEYJ473V	1/10W 47K	1	
R4031	ERJ3GEYJ473V	1/10W 47K	1	
R4032	ERJ3GEYJ681V	1/10W 680	1	
R4037	ERJ3GEYJ681V	1/10W 680	1	
R4038	ERJ3GEYJ821V	1/10W 820	1	
R4039	ERJ3GEYJ821V	1/10W 820	1	
R4040	ERJ3GEYJ221V	1/10W 220	1	
R4043	ERJ3GEYJ221V	1/10W 220	1	
R4902	ERJ3GEY0R00V	1/10W 0	1	
R7301	ERJ3GEYJ101V	1/10W 100	1	
R7302	ERJ3GEYJ101V	1/10W 100	1	
R7304	ERJ3GEY0R00V	1/10W 0	1	
R7305	ERJ3GEY0R00V	1/10W 0	1	
R7306	ERJ3GEYJ472V	1/10W 4.7K	1	
R7307	ERJ3GEYJ102V	1/10W 1K	1	
R7308	ERJ3GEY0R00V	1/10W 0	1	
R7401	ERJ3GEY0R00V	1/10W 0	1	
R7402	ERJ3GEYJ562V	1/10W 5.6K	1	
R7403	ERJ3GEYJ222V	1/10W 2.2K	1	
R7404	ERJ3GEY0R00V	1/10W 0	1	
R7405	ERJ3GEY0R00V	1/10W 0	1	
R7407	ERJ3GEYJ103V	1/10W 10K	1	
R7408	ERJ3GEYJ101V	1/10W 100	1	
R7501	ERJ3GEYJ473V	1/10W 47K	1	
R7503	ERDS2TJ470T	1/4W 47	1	
R7504	ERJ3GEYJ221V	1/10W 220	1	
R7506	ERJ3GEYJ822V	1/10W 8.2K	1	
R7509	ERJ3GEYJ101V	1/10W 100	1	
R7510	ERJ3GEYJ822V	1/10W 8.2K	1	
R7511	ERJ3GEYJ473V	1/10W 47K	1	
R7513	ERJ3GEYJ472V	1/10W 4.7K	1	
R7514	ERJ3GEYJ223V	1/10W 22K	1	
R7515	ERJ3GEYJ102V	1/10W 1K	1	
R7516	ERJ3GEYJ473V	1/10W 47K	1	
R7517	ERJ3GEYJ822V	1/10W 8.2K	1	
R7518	ERJ3GEYJ101V	1/10W 100	1	
R7519	ERJ3GEYJ101V	1/10W 100	1	
R7520	ERJ3GEYJ101V	1/10W 100	1	
R7521	ERJ3GEYJ473V	1/10W 47K	1	
R7522	ERJ3GEYJ101V	1/10W 100	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7523	ERJ3GEYJ101V	1/10W 100	1	
R7524	ERJ3GEYJ101V	1/10W 100	1	
R7525	ERJ3GEYJ101V	1/10W 100	1	
R7526	ERJ3GEYJ101V	1/10W 100	1	
R7527	ERJ3GEYJ103V	1/10W 10K	1	
R7528	ERJ3GEYJ101V	1/10W 100	1	
R7529	ERJ3GEYJ473V	1/10W 47K	1	
R7532	ERJ3GEYJ101V	1/10W 100	1	
R7533	ERJ3GEYJ104V	1/10W 100K	1	
R7534	ERJ3GEYJ223V	1/10W 22K	1	
R7535	ERJ3GEYJ101V	1/10W 100	1	
R7537	ERJ3GEYJ101V	1/10W 100	1	
R7538	ERJ3GEYJ473V	1/10W 47K	1	
R7539	ERJ3GEYF823V	1/10W 82K	1	
R7540	ERJ3GEY0R00V	1/10W 0	1	
R7541	ERJ3GEYJ101V	1/10W 100	1	
R7542	ERJ3GEYF753V	1/10W 75K	1	
R7544	ERJ3GEYJ101V	1/10W 100	1	
R7545	ERDS2TJ331T	1/4W 330	1	
R7546	ERDS2TJ1R0T	1/4W 1.0	1	
R7547	ERJ3GEYJ101V	1/10W 100	1	
R7548	ERJ3GEYJ103V	1/10W 10K	1	
R7549	ERJ3GEYJ473V	1/10W 47K	1	
R7550	ERJ3GEYJ562V	1/10W 5.6K	1	
R7551	ERJ3GEYJ470V	1/10W 47	1	
R7552	ERJ3GEYJ473V	1/10W 47K	1	
R7553	ERJ3GEYJ473V	1/10W 47K	1	
R7556	ERJ3GEYJ101V	1/10W 100	1	
R7557	ERJ3GEYJ101V	1/10W 100	1	
R7565	ERJ3GEYJ103V	1/10W 10K	1	
R7566	ERJ3GEYJ153V	1/10W 15K	1	
R7567	ERJ3GEYJ821V	1/10W 820	1	
R7568	ERJ3GEYJ303V	1/10W 30K	1	
R7571	ERJ3GEYJ101V	1/10W 100	1	
R7572	ERJ3GEYJ103V	1/10W 10K	1	
R7573	ERJ3GEYJ274V	1/10W 270K	1	
R7584	ERJ3GEYJ101V	1/10W 100	1	
R7590	ERJ3GEYJ473V	1/10W 47K	1	
R7592	ERJ3GEYJ473V	1/10W 47K	1	
R7599	ERJ3GEYJ473V	1/10W 47K	1	
R7600	ERJ3GEYJ272V	1/10W 2.7K	1	
R7601	ERJ3GEYJ152V	1/10W 1.5K	1	
R7602	ERJ3GEYJ222V	1/10W 2.2K	1	
R7603	ERJ3GEYJ392V	1/10W 3.9K	1	
R7801	ERJ3GEYJ681V	1/10W 680	1	
R7802	ERJ3GEYJ104V	1/10W 100K	1	
R7803	ERDS2TJ102T	1/4W 1K	1	
R7804	ERJ3GEY0R00V	1/10W 0	1	
R7805	ERJ3GEY0R00V	1/10W 0	1	
S7501	EVQ11A04M	SWITCH,	1	
S7502	EVQ11A04M	SWITCH,	1	
S7503	EVQ11A04M	SWITCH,	1	
S7504	EVQ11A04M	SWITCH,	1	
S7505	EVQ11A04M	SWITCH,	1	
S7506	EVQ11A04M	SWITCH,	1	
S7507	EVQ11A04M	SWITCH,	1	
T1101	G4D2A0000249	TRANSFORMER	1	⚠
T7501	G4D1A0000115	TRANSFORMER	1	
TU7801	ENGF6703KF	TUNER,VHF/UHF	1	
VA1101	ERZVA5V471	VARISTOR	1	⚠
VA1102	ERZVA5V471	VARISTOR	1	⚠
W501	ERJ3GEY0R00V	1/10W 0	1	
W502	ERJ3GEY0R00V	1/10W 0	1	
W503	ERJ3GEY0R00V	1/10W 0	1	
W504	ERJ3GEY0R00V	1/10W 0	1	
W505	ERJ6GEY0R00V	1/8W 0	1	
W506	ERJ3GEY0R00V	1/10W 0	1	
W507	ERJ6GEY0R00V	1/8W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
W508	ERJ6GEY0R00V	1/8W 0	1	
W509	ERJ6GEY0R00V	1/8W 0	1	
W510	ERJ6GEY0R00V	1/8W 0	1	
W511	ERJ6GEY0R00V	1/8W 0	1	
W512	ERJ6GEY0R00V	1/8W 0	1	
W513	ERJ3GEY0R00V	1/10W 0	1	
W514	ERJ6GEY0R00V	1/8W 0	1	
W515	ERJ3GEY0R00V	1/10W 0	1	
W516	ERJ3GEY0R00V	1/10W 0	1	
W517	ERJ3GEY0R00V	1/10W 0	1	
W518	ERJ6GEY0R00V	1/8W 0	1	
W519	ERJ3GEY0R00V	1/10W 0	1	
W520	ERJ3GEY0R00V	1/10W 0	1	
W521	ERJ3GEY0R00V	1/10W 0	1	
W522	ERJ3GEY0R00V	1/10W 0	1	
W523	ERJ6GEY0R00V	1/8W 0	1	
W524	ERJ6GEY0R00V	1/8W 0	1	
W525	ERJ6GEY0R00V	1/8W 0	1	
W526	ERJ6GEY0R00V	1/8W 0	1	
W527	ERJ6GEY0R00V	1/8W 0	1	
W528	ERJ3GEY0R00V	1/10W 0	1	
W529	ERJ6GEY0R00V	1/8W 0	1	
W530	ERJ3GEY0R00V	1/10W 0	1	
W531	ERJ6GEY0R00V	1/8W 0	1	
W532	ERJ6GEY0R00V	1/8W 0	1	
W533	ERJ3GEY0R00V	1/10W 0	1	
W534	ERJ3GEY0R00V	1/10W 0	1	
W535	ERJ3GEY0R00V	1/10W 0	1	
W536	ERJ3GEY0R00V	1/10W 0	1	
W537	ERJ3GEY0R00V	1/10W 0	1	
W538	ERJ3GEY0R00V	1/10W 0	1	
W539	ERJ3GEY0R00V	1/10W 0	1	
W540	ERJ6GEY0R00V	1/8W 0	1	
W541	ERJ3GEY0R00V	1/10W 0	1	
W542	ERJ3GEY0R00V	1/10W 0	1	
W543	ERJ3GEY0R00V	1/10W 0	1	
W544	ERJ3GEY0R00V	1/10W 0	1	
W545	ERJ3GEY0R00V	1/10W 0	1	
W546	ERJ6GEY0R00V	1/8W 0	1	
W547	ERJ6GEY0R00V	1/8W 0	1	
W548	ERJ3GEY0R00V	1/10W 0	1	
W549	ERJ6GEY0R00V	1/8W 0	1	
X7501	H0D100500016	CRYSTAL OSCILLATOR	1	
ZA1101	EYF52BCY	FUSE HOLDER	1	
ZA1102	EYF52BCY	FUSE HOLDER	1	
ZA1103	K9ZZ00001279	EARTH PLATE	1	
ZA1104	K9ZZ00001279	EARTH PLATE	1	
ZA1150	VSC5603-A	EARTH PLATE	1	
ZA1151	XYN3+J8FJ	SCREW	1	
ZA1260	VSC5604-A	EARTH PLATE	1	
ZA1261	XYN3+J8FJ	SCREW	1	
ZB7501	RMN0872	FL HOLDER(A)	1	
ZB7503	RMN0873	FL HOLDER(B)	1	
ZJ7405	K9ZZ00001279	EARTH PLATE	1	
ZJ7406	K9ZZ00001279	EARTH PLATE	1	
ZJ7407	K9ZZ00001279	EARTH PLATE	1	
ZJ7409	K9ZZ00001279	EARTH PLATE	1	
■	VEP73143A	FRONT JACK P.C.B.	1	(RTL)
C3907	F1H1C104A071	16V 0.1U	1	
C3908	ECJ1VB1H103K	50V 0.01U	1	
JK3801	K2HA307A0009	JACK,IN2	1	
JK3802	K1CB104A0017	JACK,IN2	1	
LB3913	J0JCC0000103	COIL	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB3914	J0JCC0000103	COIL	1	
LB3915	J0JCC0000103	COIL	1	
LB4911	J0JCC0000103	COIL	1	
LB4912	J0JCC0000103	COIL	1	
R3926	ERJ3GEYJ102V	1/10W 1K	1	
R3927	ERJ3GEYJ750V	1/10W 75	1	
R3928	ERJ3GEYJ750V	1/10W 75	1	
R3929	ERJ3GEYJ750V	1/10W 75	1	
ZJ3901	K9ZZ00001279	EARTH PLATE	1	
■	VEP73142A	FRONT(L)P.C.B.	1	(RTL)
S7002	EVQ11A04M	SWITCH,POWER	1	
■	VEP73145A	DV JACK P.C.B.	1	(RTL)
P37001	K1MN07AA0003	CONNECTOR(7P)	1	
P37002	K1FY104B0006	CONNECTOR(4P)	1	
W101	ERJ6GEY0R00V	1/8W 0	1	
W102	ERJ3GEY0R00V	1/10W 0	1	
W103	ERJ6GEY0R00V	1/8W 0	1	
ZJ37001	K9ZZ00001279	EARTH PLATE	1	
■		CASING/ACCESSORY /PACKING		
1	VXY1961	DVD DRIVE UNIT	1	(RTL)
2	VEP73143A	FRONT JACK P.C.B.	1	(RTL)
3	VEP73145A	DV JACK P.C.B.	1	(RTL)
4	VEP79141A	MAIN P.C.B.	1	(RTL)
5	RFKB79142A	DIGITAL P.C.B.	1	(RTL)
6	L6FAJCCH0007	FAN MOTOR	1	
7	RGR0364D-C	REAR PANEL	1	⚠
8	RHD30111-3	SCREW	13	
9	RHD30119-L	SCREW	13	
10	RHD30151	SCREW	1	
11	RMA2047	FRONT ANGLE	1	
12	RMA2048	DRIVE ANGLE	1	
13	RMA2049	REAR ANGLE	1	
14	RKA0144-K	FOOT	5	
15	RMZ0825-1	SHEET	2	
16	VEE1D24	WIRE WITH CONNECTOR(4P)	1	
17	VMC1534	EARTH SPRING	2	
18	VWJ1932	FFC(7P)	1	
19	VWJ1949	FFC(40P)	1	
20	XSN3+4FJ	SCREW	2	
24	RYP1372-S	FRONT PANEL ASS'Y1	1	(S)
24	RYP1372-K	FRONT PANEL ASS'Y1	1	(K)
24-1	RKF0787-S	PANEL DOOR	1	(S)
24-1	RKF0787-K	PANEL DOOR	1	(K)
24-2	RYF0813-K	TRAY DOOR ASS'Y	1	
24-2-1	RMB0871-1	BLINDER SPRING	1	
24-3	RYF0814-K	FL ORNAMENT	1	
25	VEP73142A	FRONT(L)P.C.B.	1	(RTL)
26	RHD30113	SCREW	2	(S)
26	RHD30113-1K	SCREW	2	(K)
27	RMX0393	SHEET	1	
28	RKM0551A-S	TOP COVER	1	(S) ⚠
28	RKM0551A-K	TOP COVER	1	(K) ⚠
29	RGQ0486-K	SHEET	1	
30	RMZ0910	FL SHEET	1	
A1	EUR7659T50	REMOTE CONTROL ASS'Y	1	
A1-1	UR76EC5903A	BATTERY COVER	1	
A2	K2CB2CB00018	AC CORD	1	⚠

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
A3	K2KA6BA00003	AV CORD	1	
A4	K2KZ2BA00001	RF COAXIAL CABLE	1	
A5	RPQCF0006-2	ACCESSORY BOX	1	
A6	RPFC0031-B	POLYETHYLENE BAG	1	
A7	RQT8850-1P	OPERATING INSTRUCTONS	1	(IA) ⚠
PC1	RPG8153-1	PACKING CASE	1	(S)
PC1	RPG8202-1	PACKING CASE	1	(K)
PC2	RPN1964A	CUSHION(A)	1	
PC3	RPN1964B	CUSHION(B)	1	
PC4	RPF0458	POLYETHYLENE BAG	1	